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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9

IN THE MATTER OF:
MOTOROLA 52ND STREET SUPERFUND SITE
Salt River Project
1616 East Lincoln
Phoenix, AZ
RESPONDENT
Proceeding Under Sections 104, 122(a),
and 122(d)(3) of the Comprehensive
Environmental Response, Compensation,
and Liability act as amended
(42 U.S.C Sections 9604, 9622(a),
9622(d)(3)).

U.S. EPA Docket No. 2004-19

ADMINISTRATIVE ORDER ON CONSENT
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

4
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5 I. INTRODUCTION

6 1. This Administrative Order on Consent ("Consent Order") is entered into
7 voluntarily by the United States Environmental Protection Agency (EPA) and Salt River Project
8 ("Respondent"). The Consent Order concerns the preparation and performance of, and
9 reimbursement for all costs incurred by EPA in connection with, a remedial investigation and
10 feasibility study ("RI/FS") for the Salt River Project Site ("Site"), located within the third
11 operable unit of the Motorola 52nd Street Superfund Site ("52nd Street Site") in Phoenix, Arizona.

12 II. JURISDICTION AND GENERAL PROVISIONS

13 2. This Consent Order is issued under the authority vested in the President of the
14 United States by Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental
15 Response, Compensation, and Liability Act, as amended, 42 U.S.C. Sections 9604, 9622(a),
16 9622(d)(3) (CERCLA). This authority was delegated to the Administrator of EPA on January
17 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926, further delegated to Regional
18 Administrators on September 13, 1987, by EPA Delegation No. 14-14-c, and further redelegated
19 to Region IX Superfund Branch Chiefs by the Regional Administrator of Region IX on
20 September 25, 1997.

21 3. The Respondent agrees to undertake all actions required by the terms and
22 conditions of this Consent Order. In any action by EPA or the United States to enforce the terms
23 of this Consent Order, Respondent consents to and agrees not to contest the authority or
24 jurisdiction of the Superfund Branch Chief to issue or enforce this Consent Order, and agrees not
25 to contest the validity of this Consent Order or its terms.

26 4. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C. §§
27 9604(b)(2) and 9622(j)(1), EPA notified the Arizona Department of Environmental Quality,
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4 Arizona Game and Fish Department, U.S. Department of Defense, U.S. Department of Interior,
5 National Oceanic and Atmospheric Administration, and U.S. Department of Agriculture on
6 September 3, 2003 and the U.S. Department of Energy on October 3, 2003 of negotiations with
7 potentially responsible parties regarding the release of hazardous substances that may have
8 resulted in injury to the natural resources under Federal and State trusteeship.

9 **III. PARTIES BOUND**

10 5. This Consent Order shall apply to and be binding upon EPA and shall be binding
11 upon the Respondent, its agents, successors, assigns, officers, directors and principals.

12 Respondent is responsible for carrying out all actions required of it by this Consent Order.

13 Respondent's signatory to this Consent Order certifies that he/she is authorized to execute and
14 legally bind the party he/she represents to this Consent Order. No change in the ownership or
15 corporate status of the Respondent or of the Site shall alter Respondent's responsibilities under
16 this Consent Order.

17 6. Respondent is liable for carrying out all activities required by this Consent Order.

18 7. The Respondent shall provide a copy of this Consent Order to any subsequent
19 owners or successors of the Site before ownership rights or stock or assets in a corporate
20 acquisition are transferred. Respondent shall provide a copy of this Consent Order to all
21 contractors, subcontractors, laboratories, and consultants that are retained to conduct any work
22 performed under this Consent Order, within 14 days after the effective date of this Consent
23 Order or the date of retaining their services, whichever is later. Respondent shall condition any
24 such contracts upon satisfactory compliance with this Consent Order. Notwithstanding the terms
25 of any contract, Respondent is responsible for compliance with this Consent Order and for
26 ensuring that their subsidiaries, employees, contractors, consultants, subcontractors, agents and
27 attorneys comply with this Consent Order.
28

IV. STATEMENT OF PURPOSE

5 8. In entering into this Consent Order, the objectives of EPA and the Respondent
6 are: (a) to determine the nature and extent of contamination, if any, at the Site and any threat to
7 the public health, welfare, or the environment caused by the release or threatened release of
8 hazardous substances, pollutants or contaminants at or from the Site, by conducting a remedial
9 investigation; (b) to determine and evaluate alternatives for remedial action (if any) to prevent,
10 mitigate or otherwise respond to or remedy any release or threatened release of hazardous
11 substances, pollutants, or contaminants at or from the Site, by conducting a feasibility study; and
12 (c) to recover response costs incurred by EPA with respect to the Site.

13 9. The activities conducted under this Consent Order are subject to approval by
14 EPA and shall provide all appropriate necessary information for the RI/FS, and for a record of
15 decision that is consistent with CERCLA and the National Contingency Plan ("NCP"), 40 C.F.R.
16 Part 300. The activities conducted under this Consent Order shall be conducted in compliance
17 with all applicable EPA guidance, policies, and procedures.
18

V. DEFINITIONS

19
20 10. Unless otherwise expressly provided herein, terms used in this Consent Order which
21 are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning
22 assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in
23 this Consent Order or in the appendices attached hereto and incorporated hereunder, the
24 following definitions shall apply:

25 a. "CERCLA" shall mean the Comprehensive Environmental Response,
26 Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*

27 b. "Consent Order" shall mean this Administrative Order on Consent, the
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4 Statement of Work, all appendices attached hereto listed in Section XXX (Severability/
5 Integration/Appendices) and all documents incorporated by reference into this document
6 including without limitation EPA-approved submissions. EPA-approved submissions are
7 incorporated into and become a part of the Consent Order upon approval by EPA. In the event
8 of conflict between this Consent Order and any Appendix, this Consent Order shall control.

9 c. "Day" shall mean a calendar day. In computing any period of time under this
10 Consent Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the
11 period shall run until the close of business of the next working day.

12 d. "Effective Date" shall be the effective date of this Consent Order as provided
13 in Section XXXII (Effective Date).

14 e. "EPA" shall mean the United States Environmental Protection Agency and any
15 successor departments or agencies of the United States.

16 f. "Future Response Costs" shall mean all costs, including, but not limited to,
17 direct and indirect costs, that the EPA incurs in connection with the Site in reviewing or
18 developing plans, reports and other items pursuant to this Consent Order, verifying the Work, or
19 otherwise implementing, overseeing, or enforcing this Consent Order, including but not limited
20 to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to
21 Paragraph 48 (costs and attorneys fees and any monies paid to secure access, including the
22 amount of just compensation), Paragraph 30 (emergency response) and Paragraph 80 (Work
23 takeover).

24 g. "Interest" shall mean interest at the rate specified for interest on investments of
25 the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded
26 annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate
27 of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject
28 to change on October 1 of each year.

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4 h. "Motorola 52nd Street Superfund Site" or "52nd Street Site" shall mean
5 Operable Units 1, 2, and 3 of the Motorola 52nd Street Superfund Site, located within the
6 approximate boundaries of 52nd Street to the east, 7th Avenue to the west, McDowell Road to the
7 north and Buckeye Road to the southwest, and depicted generally on the map, attached as
8 Appendix B.

9 i. "National Contingency Plan " or "NCP" shall mean the National Oil and
10 Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of
11 CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

12 j. "Paragraph" shall mean a portion of this Consent Order identified by an Arabic
13 numeral.

14 k. "Parties" shall mean EPA and Respondent.

15 l. "Past Response Costs" shall mean all costs, including, but not limited to, direct
16 and indirect costs, that the EPA paid in connection with the Site through June 30, 2004, plus
17 Interest on all such costs that has accrued pursuant to 42 U.S.C. § 9607(a) through such date.

18 m. "Respondent" shall mean Salt River Project.

19 n. "Section" shall mean a portion of this Consent Order identified by a Roman
20 numeral.

21 o. "Site" shall mean the Salt River Project facility, located at 1616 East Lincoln
22 Street in Phoenix, Arizona, within the Motorola 52nd Street Superfund Site, as depicted generally
23 by the map attached as Appendix C.

24 p. "Statement of Work" or "SOW" shall mean the Statement of Work for
25 development of an RI/FS for the Site, as set forth in Appendix A to this Consent Order. The
26 Statement of Work is incorporated into this Consent Order and is an enforceable part of this
27 Consent Order as are any modifications made thereto in accordance with this Consent Order.

28 q. "Waste Material" shall mean (1) any "hazardous substance" under Section

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4 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section
5 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (3) any "solid waste" under Section 1004(27)
6 of RCRA, 42 U.S.C. § 6903(27).

7 r. "Work" shall mean all activities Respondent is required to perform under this
8 Consent Order and Statement of Work.

9 VI. FINDINGS OF FACT

10 11. The "52nd Street Site" is located in Phoenix, Arizona and was listed on the EPA
11 Superfund National Priorities List on October 4, 1989, pursuant to Section 105 of CERCLA, 42
12 U.S.C. §9605. Releases of hazardous substances, primarily volatile organic compounds such as
13 trichloroethylene ("TCE"), tetrachloroethylene ("PCE"), and trichloroethane ("TCA"), from
14 various facilities within the 52nd Street Site boundaries have contributed to the groundwater
15 contamination at the 52nd Street Site. The response activities are conducted in three operable unit
16 study areas.

17 12. The Salt River Project ("Site") is located at 1616 East Lincoln, Phoenix, Arizona.
18 The Site is located in the third operable unit study area of the 52nd Street Site.

19 13. Since 1921, the Site has been used for various purposes, including equipment
20 storage and cleaning, garage operations, and a machine shop.

21 14. The groundwater within operable unit three is contaminated with certain VOCs
22 above the Federal and State drinking water standards including, TCE, PCE, and VOC
23 degradation by-products, cis-1,2-dichloroethylene and 1,1-dichloroethylene. TCA, as well as
24 additional VOC degradation by-products such as 1,1-dichloroethane, 1,2-dichloroethane, trans-
25 1,2-dichloroethylene, and vinyl chloride have also been detected. The groundwater gradient at
26 the Motorola 52nd Street Site generally flows in an east to west direction.

27 15. The Facility used VOCs, including PCE, TCE, and TCA in its equipment
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4 degreasing, electrical equipment cleaning, and other processes. Dry wells were used at the Site
5 for storm water drainage, collection and disposal. Underground Storage Tanks (USTs") and
6 drum storage areas were located at the Site. A septic system and leach fields may have been
7 used for a portion of the Site until the Site was connected to the City of Phoenix sewer system.
8 Between 1989 and 1998, Respondent conducted sampling related to the UST removals, with two
9 areas investigated for VOCs. A sump sample yielded up to 400 ug/L of TCA, 45 ug/L of PCE,
10 and 50 ug/L for 1,1-DCA. TCE and 1,1,-DCE have been detected in groundwater monitoring
11 wells at the Site. Levels measured at the northern boundary of the Site have exceeded the
12 Federal Maximum Contaminant Level for TCE and 1,1-DCE. The Respondent conducted a soil
13 vapor survey in September 2002 that indicated several areas where TCA, TCE and PCE were
14 detected in the vadose zone that require further investigation.

15 16. Salt River Project consists of the Salt River Valley Water Users' Association, an
16 Arizona corporation, and the Salt River Project Agricultural Improvement and Power District, a
17 public power utility and a political subdivision of the State of Arizona.

18 17. Respondent has owned and operated the Site since 1921.

19 VII. CONCLUSIONS OF LAW AND DETERMINATIONS

20 18. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. Section
21 9601(9).

22 19. TCE, TCA, and PCE found at the Site, as identified in the Findings of Fact above
23 are "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. Section
24 9601(14).

25 20. The conditions described in the Findings of Fact above constitute actual and/or
26 threatened "releases" as defined in Section 101(22) of CERCLA, 42 U.S.C. Section 9601(22).

27 21. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C.
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4 Section 9601(21).

5 22. Respondent is the owner and/or operator of the Facility, as defined by Section
6 101(20) of CERCLA, 42 U.S.C. Section 9601(20), and within the meaning of Section 107(a)(1)
7 or (2) of CERCLA, 42 U.S.C. §9607(a)(1) or (2) and is a responsible party under Sections 104,
8 107 and 122 of CERCLA, 42 U.S.C. Sections 9604, 9607 and 9622.

9 23. The actions required by this Consent Order are necessary to protect the public
10 health or welfare or the environment, are in the public interest, 42 U.S.C. Section 9622(a), are
11 consistent with CERCLA and the NCP, 42 U.S.C. Sections 9604(a)(1), 9622(a), and will
12 expedite effective remedial action and minimize litigation, 42 U.S.C. Section 9622(a).

13 VIII. ORDER

14 24. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations,
15 and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondent
16 shall comply with all provisions of this Consent Order, including, but not limited to, all
17 attachments to this Consent Order and all documents incorporated by reference into this Consent
18 Order.

19 IX. WORK TO BE PERFORMED

20 25. Selection of Contractors, Personnel. All work performed under this Consent
21 Order shall be under the direction and supervision of qualified personnel. Within thirty (30)
22 days of the effective date of this Consent Order, and before the work outlined below begins, the
23 Respondent shall notify EPA in writing of the names, titles, and qualifications of the personnel,
24 including contractors, subcontractors, consultants and laboratories to be used in carrying out
25 such work. With respect to any proposed contractor, the Respondent shall demonstrate that the
26 proposed contractor has a quality system which complies with ANSI/ASQC E4-1994,
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4 "Specifications and Guidelines for Quality Systems for Environmental Data Collection and
5 Environmental Technology Programs," (American National Standard, January 5, 1995), by
6 submitting a copy of the proposed contractor's Quality Management Plan (QMP). The QMP
7 should be prepared in accordance with "EPA Requirements for Quality Management Plans
8 (QA/R-2)," (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by
9 EPA.

10 26. Activities and Deliverables. Respondent shall conduct activities and submit
11 deliverables as provided by the attached RI/FS Statement of Work ("SOW"), which is
12 incorporated by reference, and is binding upon Respondent. All such work shall be conducted in
13 accordance with CERCLA, the NCP, and EPA guidance including, but not limited to, the
14 "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under
15 CERCLA" (OSWER Directive # 9355.3-01), "Guidance for Data Usability in Risk Assessment"
16 (OSWER Directive #9285.7-05) and guidance referenced therein, as well as guidance referenced
17 in the Statement of Work, as may be amended or modified by EPA. All work performed under
18 the Consent Order shall be in accordance with the schedules in the SOW, and in full accordance
19 with the standards, specifications, and other requirements of the Focused RI/FS Work Plan,
20 Health and Safety Plan, and Sampling and Analysis Plan, as initially approved or modified by
21 EPA, and as may be amended or modified by EPA from time to time.

22 27. Upon receipt of the draft Focused Feasibility Study Report, EPA will evaluate, as
23 necessary, the estimates of the risk to the public and environment that are expected to remain
24 after a particular remedial alternative has been completed. Respondent shall incorporate EPA's
25 evaluation and analysis into the final Focused Feasibility Study Report that is submitted to EPA
26 for review and approval.

27 28. EPA reserves the right to stop Respondent from proceeding further, either
28 temporarily or permanently, on any tasks, activity or deliverable required by this Consent Order.

4 29. Off-Site Shipment of Waste Material. Respondent shall, fourteen days prior to any
5 off-site shipment of hazardous substances from Work at the Site to an out-of-state waste
6 management facility, provide written notification to the appropriate state environmental official
7 in the receiving state and to EPA's Project Coordinator of such shipment of hazardous
8 substances. However, the notification of shipments shall not apply to any such off-site
9 shipments when the total volume of such shipments will not exceed 10 cubic yards. The
10 notification shall be in writing, and shall include the following information, where available: (1)
11 the name and location of the facility to which the hazardous substances are to be shipped; (2)
12 the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for
13 the shipment of the hazardous substances; and (4) the method of transportation. Respondent
14 shall notify the receiving state of major changes in the shipment plan, such as a decision to ship
15 the hazardous substances to another facility within the same state, or to a facility in another state.
16 Prior to shipping any hazardous substances, pollutants, or contaminants relating to the Work
17 from the Site to an off-site location, Respondent shall obtain EPA's certification that the
18 proposed receiving facility is operating in compliance with the requirements of CERCLA
19 Section 121(d)(3), 42 U.S.C. §9621(d)(3), and 40 C.F.R. §300.440. Respondent shall only send
20 hazardous substances, pollutants or contaminants from the Site to an off-site facility that
21 complies with the requirements of the statutory provision and regulation cited in the preceding
22 sentence.

23 30. Emergency Response and Notification of Releases. In the event of conditions
24 posing an immediate threat to human health or welfare or the environment, Respondent shall
25 immediately take all appropriate action. Respondent shall take these actions in accordance with
26 all applicable provisions of this Consent Order, including, but not limited to, the Health and
27 Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or
28 threatened by the release. Respondent shall also immediately notify the EPA Project

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4 Coordinator or, in the event of his/her unavailability, the Regional Duty Officer at (415) 947-
5 4400, of the incident or Site conditions. In the event that Respondent fails to take appropriate
6 response action and EPA takes such action instead, Respondent shall reimburse EPA all costs of
7 the response action in connection with the Site and not inconsistent with the NCP in the manner
8 described in Section XXI (Payment of Response Costs).

9 31. In addition, in the event of any release of a hazardous substance from the Site
10 above reportable quantities under CERCLA, Respondent shall immediately notify the EPA
11 Project Coordinator or Regional Duty Officer at (415) 947-4400, and the National Response
12 Center at (800) 424-8802. Respondent shall submit a written report to EPA within 7 days after
13 each release, setting forth the events that occurred and the measures taken or to be taken to
14 mitigate any release or endangerment caused or threatened by the release and to prevent the
15 reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of,
16 reporting under Section 103(c) of CERCLA, 42 U.S.C. §9603(c), and Section 304 of the
17 Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. §11004, *et seq.*

18 19 **X. MODIFICATION OF THE FOCUSED RI/FS WORK PLAN**

20 32. If at any time during the RI/FS process, Respondent identifies a need for additional
21 data, Respondent shall submit a technical memorandum documenting the need for additional
22 data to the EPA Project Coordinator within 20 days of identification. EPA in its discretion will
23 determine whether the additional data is necessary to complete the RI/FS, whether the data will
24 be collected by Respondent, and whether it will be incorporated into reports and deliverables.

25 33. EPA may determine that in addition to tasks defined in the initially approved
26 Focused RI/FS Work Plan, other additional work may be necessary to accomplish the objectives
27 of the RI/FS as set forth in the Statement of Work for this RI/FS. EPA may require that the
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4 Respondent perform these response actions in addition to those required by the initially approved
5 Focused RI/FS Work Plan, including any approved modifications, if it determines that such
6 actions are necessary for a complete RI/FS. EPA will submit in writing to the Respondent the
7 additional response actions necessary for a complete Focused RI/FS and the basis for those
8 response actions. Respondent shall confirm its willingness to perform the additional work in
9 writing to the EPA within 7 days of receipt of the EPA request or Respondent shall invoke
10 dispute resolution. Subject to EPA resolution of any dispute, Respondent shall implement the
11 additional tasks which EPA determines are necessary. Respondent shall complete the additional
12 work according to the standards, specifications, and schedule set forth or approved by EPA in a
13 written modification to the Focused RI/FS Work Plan or written work plan supplement. EPA
14 reserves the right to conduct the Work itself at any point if EPA determines that Respondent's
15 response actions are or will not be accurate, thorough or timely, to seek reimbursement from
16 Respondent, and or to seek any other appropriate relief. Nothing in this Paragraph shall be
17 construed to limit EPA's authority to require performance of further response actions at the Site.

18 34. In the event of unanticipated or changed circumstances at the Site, Respondent
19 shall notify the EPA Project Coordinator by telephone or e-mail within 24 hours of discovery of
20 the unanticipated or changed circumstances. In addition to the authorities in the NCP, in the
21 event that EPA determines that the immediate threat or the unanticipated or changed
22 circumstances warrant changes in the work plan, EPA shall modify or amend the work plan in
23 writing accordingly. Respondent shall perform the work plan as modified or amended.

24 **XI. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS**

25 35. After review of any plan, report or other item that is required to be submitted for
26 approval pursuant to this Consent Order, EPA shall: (a) approve, in whole or in part, the
27 submission; (b) approve the submission upon specified conditions; (c) modify the submission to
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4 cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that
5 Respondent modify the submission; or (e) any combination of the above. However, EPA shall
6 not modify a submission without first providing Respondent at least one notice of deficiency and
7 an opportunity to cure within 21 days, except where to do so would cause serious disruption to
8 the Work or where previous submission(s) have been disapproved due to material defects and the
9 deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an
10 acceptable deliverable.

11 36. In the event of approval, approval upon conditions, or modification by EPA,
12 Respondent shall proceed to take any action required by the plan, report or other item, as
13 approved or modified by EPA subject only to its right to invoke the Dispute Resolution
14 procedures set forth in Section XVIII (Dispute Resolution) with respect to the modifications or
15 conditions made by EPA. In the event that EPA modifies the submission to cure the deficiencies
16 and the submission has a material defect, EPA retains the right to seek stipulated penalties, as
17 provided in Section XIX (Stipulated Penalties). EPA also retains the right to perform its own
18 studies, complete the RI/FS (or any portion thereof) under CERCLA and the NCP, and seek
19 reimbursement from Respondent for its costs; and/or seek any other appropriate relief.

20 37. Resubmission of Plans.

21 a. Upon receipt of a notice of disapproval, Respondent shall, within 21 days or such
22 longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan,
23 report, or other item for approval.

24 b. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed, at
25 the direction of EPA, to take any action required by any non-deficient portion of the submission.
26 Implementation of any non-deficient portion of a submission shall not relieve Respondent of any
27 liability for stipulated penalties under Section XIX (Stipulated Penalties).

28 c. In the event that a resubmitted plan, report or other item, or portion thereof, is

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4 disapproved by EPA, EPA may again require Respondent to correct the deficiencies, in
5 accordance with the preceding Paragraphs. EPA also retains the right to modify or develop the
6 plan, report or other item. Respondent shall implement any such plan, report, or item as
7 modified or developed by EPA, subject only to its right to invoke the procedures set forth in
8 Section XVIII (Dispute Resolution).

9 d. If upon resubmission, a plan, report, or item is disapproved or modified by EPA due to
10 a material defect, Respondent shall be deemed to have failed to submit such plan, report, or item
11 timely and adequately unless Respondent invokes the dispute resolution procedures set forth in
12 Section XVIII (Dispute Resolution) and EPA's action is overturned pursuant to that Section.
13 The provisions of Section XVIII (Dispute Resolution) and Section XIX (Stipulated Penalties)
14 shall govern the implementation of the Work and accrual and payment of any stipulated penalties
15 during Dispute Resolution. If EPA's disapproval or modification is upheld, stipulated penalties
16 shall accrue for such violation from the date on which the initial submission was originally
17 required, as provided in Section XIX (Stipulated Penalties).

18 38. In the event that EPA takes over some of the tasks, but not the preparation of the
19 RI/FS, Respondent shall incorporate and integrate information supplied by EPA into the final
20 Focused Remedial Investigation and Focused Feasibility Study Reports.

21 39. All plans, reports, and other items required to be submitted to EPA under this
22 Consent Order shall, upon approval or modification by EPA, be enforceable under this Consent
23 Order. In the event EPA approves or modifies a portion of a plan, report, or other item required
24 to be submitted to EPA under this Consent Order, the approved or modified portion shall be
25 enforceable under this Consent Order.

26 XII. QUALITY ASSURANCE

27 40. Respondent shall assure that Work performed, samples taken and analyses
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4 conducted conform to the requirements of the SOW, the QAPP and guidances identified therein.
5 Respondent will assure that field personnel used by Respondent are properly trained in the use of
6 field equipment and in chain of custody procedures. Respondent shall only use laboratories
7 which have a documented quality system that complies with "EPA Requirements for Quality
8 Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation
9 as determined by EPA.

10 **XIII. PROGRESS REPORTS AND MEETINGS**

11 41. Respondent shall make presentations at, and participate in, meetings at the request
12 of EPA during the initiation, conduct, and completion of the Focused RI/FS. In addition to
13 discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new
14 issues.

15 42. Respondent shall provide to EPA monthly progress reports by the tenth day of the
16 following month. After Respondent provides Notification of Initiation of Fieldwork as required
17 by SOW Section 4.1, and continuing until Respondent provides Notification of Completion of
18 Fieldwork as required by SOW Section 4.1, Respondent shall provide to EPA weekly progress
19 reports, as well as monthly progress reports, on Monday for the preceding week. At a
20 minimum, with respect to the preceding reporting period, these progress reports shall (1)
21 describe the actions which have been taken to comply with this Consent Order during that
22 reporting period; (2) include all results of sampling and tests and all other data received by the
23 Respondents; (3) describe work planned for the next two reporting periods with schedules
24 relating such work to the overall project schedule for Focused RI/FS completion; and (4)
25 describe all problems encountered and any anticipated problems, any actual or anticipated
26 delays, and solutions developed and implemented to address any actual or anticipated problems
27 or delays. Respondent may submit weekly progress reports electronically and shall submit
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4 monthly progress reports in hard copy unless otherwise agreed to by EPA's Project Coordinator.
5 Respondent shall notify EPA's Project Coordinator within one day of all changes to any
6 schedule included in a weekly report. While conducting fieldwork, Respondent shall use best
7 efforts to provide daily updates to EPA's Project Coordinator. These updates may be submitted
8 electronically. Daily updates are not subject to stipulated penalties as described in Section XIX
9 (Stipulated Penalties).

10 **XIV. SAMPLING, ACCESS, AND DATA AVAILABILITY/ADMISSIBILITY**

11 43. All results of sampling, tests, modeling or other data (including raw data) generated
12 by Respondent, or on Respondent's behalf, during implementation of this Consent Order, shall
13 be submitted to EPA in the subsequent progress report as described in Section XIII of this
14 Consent Order (Progress Reports and Meetings).

15 44. Respondent will notify EPA in writing or by e-mail at least 14 days prior to
16 conducting significant field events as described in the Statement of Work, Focused Remedial
17 Investigation Work Plan or Sampling and Analysis Plan. At EPA's verbal or written request, or
18 the request of EPA's oversight assistant, Respondent shall allow split or duplicate samples to be
19 taken by EPA (and its authorized representatives) of any samples collected by the Respondent in
20 implementing this Consent Order. All split samples of Respondent shall be analyzed by the
21 methods identified in the QAPP.

22 45. At all reasonable times, EPA and its authorized representatives shall have the
23 authority to enter and freely move about all property at the Site and off-site areas where work, if
24 any, is being performed, for the purposes of inspecting conditions, activities, the results of
25 activities, records, operating logs, and contracts related to the Site or Respondent and its
26 contractor pursuant to this Consent Order; reviewing the progress of the Respondent in carrying
27 out the terms of this Consent Order; conducting tests as EPA or its authorized representatives
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4 deem necessary; using a camera, sound recording device or other documentary type equipment;
5 and verifying the data submitted to EPA by the Respondent. The Respondent shall allow these
6 persons to inspect and copy all records, files, photographs, documents, sampling and monitoring
7 data, and other writings related to work undertaken in carrying out this Consent Order. EPA
8 agrees to coordinate with Respondent, to the extent practicable, concerning security measures
9 implemented by Respondent at the Site. Nothing herein shall be interpreted as limiting or
10 affecting EPA's right of entry or inspection authority under federal law. All parties with access
11 to the Site under this Paragraph shall comply with all approved health and safety plans.

12 46. The Respondent may assert a claim of business confidentiality covering part or all
13 of the information submitted to EPA pursuant to the terms of this Consent Order under 40 C.F.R.
14 Section 2.203, provided such claim is allowed by Section 104(e)(7) of CERCLA, 42
15 U.S.C. Section 9604 (e)(7). This claim shall be asserted in the manner described by 40 C.F.R.
16 Section 2.203(b) and substantiated at the time the claim is made. Information determined to be
17 confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such
18 claim accompanies the information when it is submitted to EPA, it may be made available to the
19 public by EPA or the state without further notice to the Respondent. Respondent agrees not to
20 assert confidentiality claims with respect to any documents, reports or other information created
21 or generated pursuant to the requirements of this Consent Order or to make any claim of
22 confidentiality with respect to any data, including, but not limited to, all sampling, analytical,
23 monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or
24 information evidencing conditions at or around the Site.

25 47. In entering into this Consent Order, Respondent waives any objections to any data
26 gathered, generated, or evaluated by EPA, the Arizona Department of Environmental Quality or
27 Respondent in the performance or oversight of the work that has been verified according to the
28 quality assurance/quality control (QA/QC) procedures required by the Consent Order or any

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4 EPA-approved work plans or sampling and analysis plans. If Respondent objects to any other
5 data relating to the RI/FS, Respondent shall submit to EPA a report that identifies and explains
6 its objections, describes the acceptable uses of the data, if any, and identifies any limitations to
7 the use of the data. The report must be submitted to EPA within 15 days of the progress report
8 containing the data.

9 48. If the Site, or the off-site area that is to be used for access or is within the scope of
10 the RI/FS, is owned in whole or in part by parties other than those bound by this Consent Order,
11 Respondent will obtain, or use its best efforts to obtain, Site access agreements from the present
12 owner(s) within thirty (30) days of the effective date of this Consent Order. Such agreements
13 shall provide access for EPA, its contractors and oversight officials, the state and its contractors,
14 and the Respondent or its authorized representatives, and such agreements shall specify that
15 Respondent is not EPA's representative with respect to liability associated with Site activities.
16 Copies of such agreements shall be provided to EPA prior to Respondent's initiation of field
17 activities. Respondent's best efforts shall include providing reasonable compensation to any
18 off-site property owner. If access agreements are not obtained within the time referenced above,
19 Respondent shall immediately notify EPA of its failure to obtain access. EPA may obtain access
20 for the Respondent, perform those tasks or activities with EPA contractors, or terminate the
21 Consent Order in the event that Respondent cannot obtain access agreements. In the event that
22 EPA performs those tasks or activities with EPA contractors and does not terminate the Consent
23 Order, Respondent shall perform all other activities not requiring access to that site, and shall
24 reimburse EPA for all costs incurred in performing such activities. Respondent additionally
25 shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables.
26 Respondent also shall reimburse EPA for all costs and attorney fees incurred by the United
27 States to obtain access for the Respondent in the manner described in Section XXI (Payment of
28 Response Costs).

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4 **XV. DESIGNATED PROJECT COORDINATORS**

5 49. Documents including reports, approvals, disapprovals, and other correspondence
6 that are mailed pursuant to this Consent Order, shall be sent by certified mail, return receipt
7 requested, to the following addressees or to any other addressees which the Respondent and EPA
8 designate in writing:

9 (a) Respondent will send copies of all documents to be submitted to EPA to EPA's
10 Project Coordinator as identified below:

11 2 hard copies and 1 electronic copy to:

12 Nadia Hollan
13 Remedial Project Manager
14 Superfund Division (SFD-8-2)
15 US EPA, Region IX
16 75 Hawthorne Street
17 San Francisco, CA 94105

18 hollan.nadia@epa.gov
19 (415) 972-3187

20 Respondent will also send copies of all documents submitted to EPA to:

21 1 hard copy, 3 electronic copies

22 Kris Kommalan
23 Arizona Department of Environmental Quality
24 1110 W. Washington St.
25 Phoenix, AZ 85007-2935
26 kommalan.kris@ev.state.az.us

27 1 electronic copy

28 Wayne Schiemann
US Army Corps of Engineers
AZ/NV Area Office
3636 N. Central Ave. Suite 900
Phoenix, AZ 85012-1936
wschiemann@spl.usace.army.mil

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4 2 hard copies, 1 electronic copy

5 Sue Kraemer
6 Shaw E&I
7 1326 N. Market Street
8 Sacramento, CA 95834-1912
9 sue.kraemer@theshawgrp.com

10 (b) Documents to be submitted to the Respondent should be sent to Respondent's
11 Project Coordinator as follows:

12 Daniel J. Casiraro
13 Manager, Environmental Compliance
14 Salt River Project
15 P.O. Box 52025
16 Mail Station PAB 352
17 Phoenix, AZ 85072-2025
18 Phone (602) 236-2811
19 Fax (602) 236-3407
20 djcasira@srpnet.com

21 50. Each Project Coordinator shall be responsible for overseeing the implementation of
22 this Consent Order. To the maximum extent possible, communications between the Respondent
23 and EPA shall be directed to the Project Coordinator by mail, with copies to such other persons
24 as EPA and Respondent may respectively designate. Communications include, but are not
25 limited to, all documents, reports, approvals, and other correspondence submitted under this
26 Consent Order.

27 51. EPA and the Respondent each have the right to change their respective Project
28 Coordinator. EPA and Respondent also have the right to change the number of copies of
documents required pursuant to this Consent Order. The other party must be notified in writing
at least 10 days prior to the change.

52. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial
Project Manager (RPM) and On-Scene Coordinator (OSC) by the NCP. In addition, EPA's
Project Coordinator shall have the authority consistent with the National Contingency Plan, to
halt any work required by this Consent Order, and to take any necessary response action when

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4 s/he determines that conditions at the Site may present an immediate endangerment to public
5 health or welfare or the environment. The absence of the EPA Project Coordinator from the area
6 under study pursuant to this Consent Order shall not be cause for the stoppage or delay of work.

7 **XVI. COMPLIANCE WITH OTHER LAWS**

8 53. Respondent shall comply with all local, state and federal laws that are applicable
9 when performing the RI/FS. No local, state, or federal permit shall be required for any portion
10 of any action conducted entirely on-site, including studies, where such action is selected and
11 carried out in compliance with Section 121 of CERCLA and the applicable portions of the
12 National Contingency Plan ("NCP"). Where any portion of the Work is to be conducted off-site
13 and requires a federal or state permit or approval, Respondents shall submit timely and complete
14 applications and take all other actions necessary to obtain and to comply with all such permits or
15 approvals. This Consent Order is not, and shall not be construed to be, a permit issued pursuant
16 to any federal or state statute or regulation.

17 **XVII. RETENTION OF RECORDS**

18 54. All records and documents in Respondent's possession that relate in any way to the
19 Site shall be preserved during the conduct of this Consent Order and for a minimum of 10 years
20 after commencement of construction of any remedial action. The Respondent shall acquire and
21 retain copies of all documents that relate to the Site and are in the possession of its employees,
22 agents, accountants, contractors, or attorneys. After this 10 year period, the Respondent shall
23 notify EPA at least 90 days before the documents are scheduled to be destroyed. If EPA requests
24 that the documents be saved, the Respondent shall, at no cost to EPA, give EPA the documents
25 or copies of the documents.

26 55. Respondent hereby certifies that to the best of its knowledge and belief, after
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4 thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any
5 records, documents or other information (other than exactly identical copies) relating to its
6 potential liability regarding the Site or the 52nd Street Site since July 14, 2000, the date on which
7 EPA sent Respondent an information request under 104(e) of CERCLA, 42 U.S.C. §9604(e),
8 and it has fully complied with any and all EPA requests for information pursuant to Sections
9 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA,
10 42 U.S.C. § 6927.

11 **XVIII. DISPUTE RESOLUTION**

12 56. Unless otherwise expressly provided for in this Consent Order, the dispute resolution
13 procedures of this Section shall be the exclusive mechanism for resolving disputes arising under
14 this Consent Order. The Parties shall attempt to resolve any disagreements concerning this
15 Consent Order expeditiously and informally.

16 57. If Respondent objects to any EPA action taken pursuant to this Consent Order,
17 including billings for Future Response Costs, it shall notify EPA in writing of its objection(s)
18 within five (5) days of such action, unless the objection(s) has/have been resolved informally.
19 EPA and Respondent shall have ninety (90) days from EPA's receipt of Respondent's written
20 objection(s) to resolve the dispute through formal negotiations (the "Negotiation Period"). The
21 Negotiation Period may be extended at the sole discretion of EPA.

22 58. Any agreement reached by the Parties pursuant to this Section shall be in writing and
23 shall upon signature by the Parties, be incorporated into and become an enforceable part of this
24 Consent Order. If the Parties are unable to reach an agreement within the Negotiation Period, an
25 EPA management official at the Branch Chief level or higher will issue a written decision on the
26 dispute to Respondent. EPA's decision shall be incorporated into and become an enforceable
27 part of this Consent Order. Respondent's obligations under this Consent Order shall not be
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4 tolled by submission of any objection for dispute resolution under this Section. Following
5 resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement
6 that was the subject of the dispute in accordance with the agreement reached or with EPA's
7 decision, whichever occurs.

8 **XIX. STIPULATED PENALTIES**

9 59. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in
10 this Section for failure to comply with the requirements of this Consent Order specified below
11 unless excused under Section XX (Force Majeure). "Compliance" by Respondent shall include
12 completion of the activities under this Consent Order, Focused RI/FS Work Plan or other plan
13 approved under this Consent Order identified below in accordance with all applicable
14 requirements of law, this Consent Order, the SOW, and any plans or other documents approved
15 by EPA pursuant to this Consent Order and within the specified time schedules established by
16 and approved under this Consent Order.

17 60. Stipulated Penalty Amounts - Major Deliverables

18 a. The following stipulated penalties shall accrue per day for any noncompliance
19 identified in Subparagraph 60(b):

21 <u>Penalty Per Violation Per Day</u>	22 <u>Period of Noncompliance</u>
23 \$ 7,000	24 1 st through 7 th day
25 \$ 14,000	26 8 th through 30 th day
27 \$ 27,500	28 31 st day and beyond

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b. Compliance Milestones

1. Research Report (SOW Section 3.1.3)
2. Remedial Action Objectives Technical Memorandum (SOW Section 3.2.1)
3. Draft and Final Focused RI/FS Work Plan (SOW Section 3.3.1)
4. Compliance with the Schedule contained in the Final Focused RI/FS Work Plan
5. Technical Memorandums to supplement Focused RI/FS Work Plan (SOW Section 3.3.1)
6. Draft and Final Sampling and Analysis Plan (SOW Section 3.3.2)
7. Draft and Final Site Health and Safety Plan (SOW Section 3.3.3)
8. Notification of Initiation of Field Work (SOW Section 4.1)
9. Notification of Completion of Field Work (SOW Section 4.1)
10. Draft and Final Focused Remedial Investigation Report (SOW Section 4.3)
11. Draft and Final Focused Feasibility Study Report (SOW Section 5.3)

61. Stipulated Penalty Amounts - Other Reporting.

a. The following stipulated penalties shall accrue per day for any noncompliance identified in Subparagraph 61(b):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1000.00	1 st through 7 th day
\$ 2000.00	8 th through 30 th day
\$ 4,000.00	31 st day and beyond

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4 b. Compliance Milestones

5 The compliance milestones for this subsection are as follows:

- 6 1. Monthly Progress Reports
- 7 2. Weekly Progress Reports

8 62. For any failure to perform any other work required by this Consent Order, stipulated
9 penalties shall accrue in the amount of \$2,500 per day, per violation, for the first seven days of
10 noncompliance, \$5,000 per day, per violation, for days 8 through 30 of noncompliance, and in
11 the amount of \$10,000 per day, per violation, thereafter. In the event that EPA assumes
12 performance of a portion or all of the Work pursuant to Paragraph 80 of Section XXIII
13 (Reservation of Rights by EPA), Respondent shall be liable for a stipulated penalty in the
14 amount of five hundred thousand dollars (\$500,000).

15 63. All penalties shall begin to accrue on the day after the complete performance is due
16 or the day a violation occurs, and shall continue to accrue through the final day of the correction
17 of the noncompliance or completion of the activity. However, stipulated penalties shall not
18 accrue: (1) with respect to a deficient submission under Section XI (EPA Approval of Plans and
19 Other Submissions), during the period, if any, beginning on the 31st day after EPA's receipt of
20 such submission until the date that EPA notifies Respondent of any deficiency; and (2) with
21 respect to a decision by the EPA Management Official at the Branch Chief level or higher, under
22 Section XVIII (Dispute Resolution), during the period, if any, beginning on the 21st day after the
23 Negotiation Period begins until the date that the EPA management official issues a final decision
24 regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate
25 penalties for separate violations of this Consent Order.

26 64. Following EPA's determination that Respondent has failed to comply with a
27 requirement of this Consent Order, EPA may give Respondent written notification of the same
28 and describe the noncompliance. EPA may send Respondent a written demand for the payment

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4 of the penalties. However, penalties shall accrue as provided in the preceding Paragraph
5 regardless of whether EPA has notified Respondent of a violation.

6 65. All penalties accruing under this Section shall be due and payable to EPA within 30
7 days of Respondent's receipt from EPA of a demand for payment of the penalties, unless
8 Respondent invokes the dispute resolution procedures under Section XVIII (Dispute Resolution).
9 All payments to EPA under this Section shall be paid by certified or cashier's check(s) made
10 payable to "EPA Hazardous Substances Superfund," shall be mailed to U.S. EPA - Region 9
11 ATTN: Superfund Accounting, P.O. Box 371099M, Pittsburgh, PA 15251, shall indicate that
12 the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID
13 Number 09BE, the EPA Docket Number 2004-19, and the name and address of the party(ies)
14 making payment. Copies of check(s) paid pursuant to this Section, and any accompanying
15 transmittal letter(s) shall be sent to EPA's Project Coordinator.

16 66. The payment of penalties shall not alter in any way Respondent's obligation to
17 complete performance of the Work required under this Consent Order.

18 67. Penalties shall continue to accrue during any dispute resolution period, but need not
19 be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

20 68. If Respondent fails to pay stipulated penalties when due, EPA may institute
21 proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the
22 unpaid balance, which shall begin to accrue on the date of EPA's demand.

23 69. Nothing in this Consent Order shall be construed as prohibiting, altering, or in any
24 way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of
25 Respondent's violation of this Consent Order or of the statutes and regulations upon which it is
26 based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C.
27 § 9722(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C.
28 § 9607(c)(3). Notwithstanding any other provision of this Section, EPA may, in its

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4 unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to
5 this Consent Order.

6 XX. FORCE MAJEURE

7 70. Respondent agrees to perform all requirements of this Consent Order within the
8 time limits established under this Consent Order, unless the performance is delayed by a *force*
9 *majeure*. For purposes of this Consent Order, *force majeure* is defined as any event arising from
10 causes beyond the control of Respondent or of any entity controlled by Respondent, including
11 but not limited to its contractors and subcontractors, which delays or prevents performance of
12 any obligation under this Consent Order despite Respondent's best efforts to fulfill the
13 obligation. *Force majeure* does not include financial inability to complete the Work or increased
14 cost of performance.

15 71. If any event occurs or has occurred that may delay the performance of any
16 obligation under this Consent Order, whether or not caused by a *force majeure* event,
17 Respondent shall notify by telephone the Project Coordinator or, in his or her absence, EPA's
18 Chief of the Superfund, Private Sites and DOE Section ("Section Chief"), within 48 hours of
19 when the Respondent knew or should have known that the event might cause a delay. Within
20 five business days thereafter, Respondent shall provide in writing the reasons for the delay; the
21 anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the
22 delay; a schedule for implementation of any measures to be taken to mitigate the effect of the
23 delay; and a statement as to whether, in the opinion of Respondent, such event may cause or
24 contribute to an endangerment to public health, welfare or the environment. Respondent shall
25 exercise best efforts to avoid or minimize any delay and any effects of a delay. Failure to
26 comply with the above requirements shall preclude Respondent from asserting any claim of force
27 majeure.
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4 72. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure*
5 event, the time for performance of the obligations under this Consent Order that are affected by
6 the *force majeure* event will be extended by EPA for such time as is necessary to complete those
7 obligations. An extension of the time for performance of the obligations affected by the *force*
8 *majeure* event shall not, of itself, extend the time for performance of any other obligation. If
9 EPA does not agree that the delay or anticipated delay has been or will be caused by a *force*
10 *majeure* event, EPA will notify Respondent in writing of its decision. If EPA agrees that the
11 delay is attributable to a *force majeure* event, EPA will notify Respondent in writing of the
12 length of the extension, if any, for performance of the obligations affected by the *force majeure*
13 event.

14 XXI. PAYMENT OF RESPONSE COSTS

15 73. Payment for Past Response Costs

16 a. EPA will send Respondent a bill requiring payment of all Past Response Costs
17 incurred through June 30, 2004 associated with the Site and not inconsistent with the NCP. The
18 bill will include, but is not limited to EPA's certified Agency Financial Management System
19 summary data (SCORES Reports), or such other summary as certified by EPA . Within thirty
20 (30) days after receipt of this bill, Respondent shall pay the sum of this bill to EPA for EPA's
21 Past Response Costs. Payment shall be made to EPA by certified or cashier's check made
22 payable to "EPA Hazardous Substance Superfund." Each check, or letter accompanying each
23 check, shall identify the name and address of the party making payment, the Site name as well as
24 the name of the Motorola 52nd Street Site, the EPA Region (Region 9) and Site/Spill ID Number
25 09BE, and the EPA docket number 2004-19 for this action. Payment shall be sent to:
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4 EPA - Cincinnati Accounting Operations
5 Attention: Region 9 Receivables
6 P.O. Box 371099M
7 Pittsburgh, PA 15251

8 b. At the time of payment, Respondent shall send notice that payment has been
9 made to the EPA Project Coordinator.

10 c. The total amount to be paid by Respondent pursuant to Subparagraph 73a shall
11 be deposited in the Motorola 52nd Street Superfund Site Special Account within the EPA
12 Hazardous Substance Superfund to be retained and used to conduct or finance response actions
13 at or in connection with the 52nd Street Site, or to be transferred by EPA to the EPA Hazardous
14 Substance Superfund.

15 74. Payment for Future Response Costs.

16 a. Respondent shall pay EPA all Future Response Costs not inconsistent with the
17 NCP. On a periodic basis, EPA will send Respondent a bill requiring payment, including, but
18 not limited to EPA's certified Agency Financial Management System summary data (SCORES
19 Reports), or such other summary as certified by EPA. Respondent shall make all payments
20 within 30 days of receipt of each bill requiring payment, except as otherwise provided in
21 Paragraph 78 of this Consent Order. Respondent shall make all payments required by this
22 Paragraph by a certified or cashier's check or checks made payable to "EPA Hazardous
23 Substance Superfund," referencing the name and address of the party making payment, the Site
24 name and the name of the Motorola 52nd Street Superfund Site, the EPA Region (Region 9),
25 Site/Spill ID Number 09BE, and the EPA docket number 2004-19 for this action. Respondent
26 shall send the check(s) to:

27 EPA - Cincinnati Accounting Operations
28 Attention: Region 9 Receivables
P.O. Box 371099M
Pittsburgh, PA 15251

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4 Alternatively, Respondent may make payments required by this Paragraph by Electronic
5 Funds Transfer ("EFT") in accordance with EFT procedures to be provided to Respondent by
6 EPA Region 9, and shall be accompanied by a statement identifying the name and address of the
7 party making payment, the Site name and the name of the Motorola 52nd Street Superfund Site,
8 the EPA Region (Region 9), Site/Spill ID Number 09BE, and the EPA docket number 2004-19
9 for this action.

10 b. At the time of payment, Respondent shall send notice that payment has been
11 made to the EPA Project Coordinator.

12 c. The total amount to be paid by Respondent pursuant to Subparagraph 74a shall
13 be deposited in the Motorola 52nd Street Superfund Site Special Account within the EPA
14 Hazardous Substance Superfund to be retained and used to conduct or finance response actions
15 at or in connection with the Motorola 52nd Street Site, or to be transferred by EPA to the EPA
16 Hazardous Substance Superfund.

17 75. In the event that the payments for Past Response Costs or Future Response Costs are
18 not made within 30 days of Respondent's receipt of a bill, Respondent shall pay Interest on the
19 unpaid balance. The Interest on Past Response Costs and Future Response Costs shall begin to
20 accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of
21 Interest made under this Paragraph shall be in addition to such other remedies or sanctions
22 available to the United States by virtue of Respondent's failure to make timely payments under
23 this Section, including but not limited to, payments of stipulated penalties pursuant to Section
24 XIX (Stipulated Penalties). Respondent shall make all payments required by this Paragraph in
25 the manner described in Paragraph 74.

26 76. Respondent may contest payment of the Past Response Costs or any Future
27 Response Costs if it determines that EPA has made an accounting error or if it believes EPA
28 incurred excess costs as a direct result of an EPA action that was inconsistent with the NCP or

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4 not incurred in connection with the Site. Such objection shall be made in writing within 30 days
5 of receipt of the bill and must be sent to the EPA Project Coordinator. Any such objection shall
6 specifically identify the contested cost(s) and the basis for objection. In the event of an
7 objection, Respondent shall within the 30 day period pay all uncontested Past Response Costs or
8 Future Response Costs to EPA in the manner described in Paragraph 74. Simultaneously,
9 Respondent shall establish an interest-bearing escrow account in a federally-insured bank duly
10 chartered in the State of Arizona and remit to that escrow account funds equivalent to the amount
11 of the contested Past Response Costs or Future Response Costs. Respondent shall send to the
12 EPA Project Coordinator a copy of the transmittal letter and check paying the uncontested Past
13 Response Costs or Future Response Costs, and a copy of the correspondence that establishes and
14 funds the escrow account, including, but not limited to, information containing the identity of the
15 bank and bank account under which the escrow account is established as well as a bank
16 statement showing the initial balance of the escrow account. Simultaneously with establishment
17 of the escrow account, Respondent shall initiate the Dispute Resolution procedures in Section
18 XVIII (Dispute Resolution). If EPA prevails in the dispute, within 5 days of the resolution of the
19 dispute, Respondent shall pay the sums due (with accrued interest) to EPA in the manner
20 described in Paragraph 74. If Respondent prevails concerning any aspect of the contested costs,
21 Respondent shall pay that portion of the costs (plus associated accrued interest) for which it did
22 not prevail to EPA in the manner described in Paragraph 74. Respondent shall be disbursed any
23 balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in
24 conjunction with the procedures set forth in Section XVIII (Dispute Resolution) shall be the
25 exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse
26 EPA for its Past Response Costs and Future Response Costs.
27
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4 **XXII. EPA COVENANT**

5 77. In consideration of the actions that will be performed and the payments that will be
6 made by Respondent under the terms of this Consent Order, and except as otherwise specifically
7 provided in this Consent Order, EPA covenants not to sue or take administrative action against
8 Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a),
9 for performance of the Work and for recovery of Past Response Costs and Future Response
10 Costs. This covenant shall take effect upon receipt by EPA of the Past Response Costs due
11 under Section XXI (Payment of Response Costs) of this Consent Order and any Interest or
12 Stipulated Penalties due for failure to pay Past Response Costs as required by Sections XXI
13 (Payment of Response Costs) and XIX (Stipulated Penalties). This covenant is conditioned upon
14 the complete and satisfactory performance by Respondent of all obligations under this Consent
15 Order, including, but not limited to, payment of Future Response Costs pursuant to Section XXI
16 (Payment of Response Costs). This covenant extends only to Respondent and does not extend to
17 any other person.

18 **XXIII. RESERVATIONS OF RIGHTS**

19 78. Except as specifically provided in this Consent Order, nothing herein shall limit the
20 power and authority of EPA or the United States to take, direct, or order all actions necessary to
21 protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or
22 threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid
23 waste on, at , or from the Site or the 52nd Street Site. Further, nothing herein shall prevent EPA
24 from seeking legal or equitable relief to enforce the terms of this Consent Order, from taking
25 other legal or equitable action as it deems appropriate and necessary, or from requiring
26 Respondent in the future to perform additional activities pursuant to CERCLA or any other
27 applicable law.

28 79. The covenant not to sue set forth in Section XXII (EPA Covenant) above does not

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4 pertain to any matters other than those expressly identified therein. EPA reserves, and this
5 Consent Order is without prejudice to, all rights against Respondent with respect to all other
6 matters, including, but not limited to:

7 a. claims based on a failure by Respondent to meet a requirement of this
8 Consent Order;

9 b. liability for costs not included within the definition of Past Response
10 Costs and Future Response Costs;

11 c. liability for performance of response action other than the Work;

12 d. criminal liability;

13 e. liability for damages for injury to, destruction of, or loss of natural
14 resources, and for the costs of any natural resource damage assessments;

15 f. liability arising from the past, present, or future disposal, release or
16 threat of release of Waste Materials outside of the Site; and

17 g. liability for costs incurred or to be incurred by the Agency for Toxic
18 Substances and Disease Registry related to the Site that are not paid by Respondents as Past
19 Response Costs or Future Response Costs that are not paid by Respondent as Past Response
20 Costs or Future Response Costs.

21 80. Work Takeover. In the event EPA determines that Respondent has ceased
22 implementation of any portion of the Work, is seriously or repeatedly deficient or late in its
23 performance of the Work, or is implementing the Work in a manner which may cause an
24 endangerment to human health or the environment, EPA may assume the performance of all or
25 any portion of the Work as EPA determines necessary. Respondent may invoke the procedures
26 set forth in Section XVIII (Dispute Resolution) to dispute EPA's determination that takeover of
27 the Work is warranted under this Paragraph. Costs incurred by EPA in performing the Work
28 pursuant to this Paragraph shall be considered Future Response Costs that Respondent shall pay
pursuant to Section XXI (Payment of Response Costs). Notwithstanding any other provision of

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4 this Consent Order, EPA retains all authority and reserves all rights to take any and all response
5 actions authorized by law.

6 **XXIV. RESPONDENT'S COVENANT**

7 81. Respondent covenants not to sue and agrees not to assert any claims or causes of
8 action against the United States, or its contractors or employees, with respect to the Work, Past
9 Response Costs, Future Response Costs, or this Consent Order, including, but not limited to:

10 a. any direct or indirect claim for reimbursement from the Hazardous Substance
11 Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113
12 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

13 b. any claim arising out of the Work arising out of the response actions for which
14 the Past Response Costs or Future Response Costs have or will be incurred, including any claim
15 under the United States Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to
16 Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

17 c. any claim against the United States pursuant to Sections 107 and 113 of
18 CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Site.

19 82. Nothing in this Agreement shall constitute approval or preauthorization of a claim
20 within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or
21 40 C.F.R. § 300.700(d).

22 83. By signing this Consent Order and taking actions under this Consent Order, the
23 Respondent does not agree with EPA's Findings of Fact and Conclusions of Law. Furthermore,
24 the participation of the Respondent in this Consent Order is not an admission of liability and is
25 not admissible in evidence against the Respondent in any judicial or administrative proceeding
26 other than a proceeding by the United States, including EPA, to enforce this Consent Order or a
27 judgment relating to it. Respondent retains its rights to assert claims against other potentially
28 responsible parties at the Site. However, the Respondent agrees not to contest the validity or

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4 terms of this Consent Order, or the procedures underlying or relating to it in any action brought
5 by the United States, including EPA, to enforce its terms.

6 **XXV. OTHER CLAIMS**

7 84. By issuance of this Consent Order, the United States or EPA assumes no liability for
8 injuries or damages to persons or property resulting from any acts or omissions of Respondent.
9 The United States or EPA shall not be deemed a party to any contract entered into by Respondent
10 or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or
11 consultants in carrying out actions pursuant to this Consent Order.

12 85. Except as expressly provided in Section XXIII (Reservation of Rights) and Section
13 XXII (EPA Covenant), nothing in this Consent Order constitutes a satisfaction of or release from
14 any claim or cause of action against Respondent or any person not a party to this Consent Order,
15 for any liability such person may have under CERCLA, other statutes, or common law, including
16 but not limited to any claims of the United States for costs, damages and interest under
17 Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

18 86. No action or decision by EPA pursuant to this Consent Order shall give rise to any
19 right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

21 **XXVI. CONTRIBUTION PROTECTION**

22 87. The Parties agree that Respondent is entitled, as of the Effective Date, to protection
23 from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA,
24 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Consent Order. The
25 "matters addressed" in this Consent Order are the Work, Past Response Costs, and Future
26 Response Costs. Nothing in this Consent Order precludes the United States or Respondent from
27 asserting any claims, causes of action, or demands against any person not a party to this Consent
28 Order for indemnification, contribution, or cost recovery.

4 **XXVII. INDEMNIFICATION**

5 88. Respondent shall indemnify, save and hold harmless the United States, its officials,
6 agents, contractors, subcontractors, employees and representatives from any and all claims or
7 causes of action arising from, or on account of negligent or other wrongful acts or omissions of
8 Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying
9 out actions pursuant to this Consent Order. In addition, Respondent agrees to pay the United
10 States all costs incurred by the United States, including but not limited to attorneys fees and other
11 expenses of litigation and settlement, arising from or on account of claims made against the
12 United States based on negligent or other wrongful acts or omissions of Respondent, its officers,
13 directors, employees, agents, contractors, subcontractors and any persons acting on its behalf or
14 under its control, in carrying out activities pursuant to this Consent Order. The United States
15 shall not be held out as a party to any contract entered into by or on behalf of Respondent in
16 carrying out activities pursuant to this Consent Order. Neither Respondent nor any such
17 contractor shall be considered an agent of the United States.

18 89. Respondent waives all claims against the United States for damages or reimbursement
19 or for set-off of any payments made or to be made to the United States, arising from or on account
20 of any contract, agreement, or arrangement between Respondent and any person for performance
21 of Work on or relating to the Site. In addition, Respondent shall indemnify and hold harmless the
22 United States with respect to any and all claims for damages or reimbursement arising from or on
23 account of any contract, agreement, or arrangement between Respondent and any person for
24 performance of Work on or relating to the Site.

25 **XXVIII. INSURANCE**

26 90. At least fifteen (15) days prior to Notification of Fieldwork as required by Section 4.1
27 of the SOW, Respondent shall secure, and shall maintain for the duration of this Consent Order,
28 comprehensive general liability insurance and automobile insurance with limits of two million

4 dollars, combined single limit, naming the United States as an additional insured. Within the
5 same period, Respondent shall provide EPA with certificates of such insurance and a copy of each
6 insurance policy. Respondent shall submit such certificates and copies of policies each year on
7 the anniversary of the Effective Date. In addition, for the duration of the Consent Order,
8 Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all
9 applicable laws and regulations regarding the provision of worker's compensation insurance for
10 all persons performing the Work on behalf of Respondent in furtherance of this Consent Order. If
11 Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor
12 maintains insurance equivalent to that described above, or insurance covering some or all of the
13 same risks but in an equal or lesser amount, then Respondent need provide only that portion of the
14 insurance described above which is not maintained by such contractor or subcontractor.

15 XXIX. FINANCIAL ASSURANCE

16 91. Prior to Notification of Fieldwork as required by Section 4.1 of the SOW, Respondent
17 shall establish and maintain financial security for the benefit of EPA in the amount required to
18 fully and adequately complete the Work in one or more of the following forms:

- 19 a. a surety bond unconditionally guaranteeing payment and/or performance of the
20 Work;
- 21 b. one or more irrevocable letters of credit, payable to or at the direction of EPA,
22 issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated
23 cost of the Work;
- 24 c. a trust fund administered by a trustee acceptable in all respects to EPA;
- 25 d. a policy of insurance issued by an insurance carrier acceptable in all respects to
26 EPA, which ensures the payment and/or performance of the Work;
- 27 e. a corporate guarantee to perform the Work provided by one or more parent
28 corporations or subsidiaries of Respondent, or by one or more unrelated corporations that have a

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4 substantial business relationship with Respondent; including a demonstration that any such
5 company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or

6 f. a corporate guarantee to perform the Work by Respondent, including a
7 demonstration that Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

8 g. a demonstration that the Respondent possesses sufficient net worth to complete
9 the Work required by this Consent Order, as evidenced by audited financial statements
10 determined by EPA to show sufficient net worth.

11 92. Any and all financial assurance instruments provided pursuant to this Section shall be
12 in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that
13 EPA determines at any time that the financial assurances provided pursuant to this Section
14 (including, without limitation, the instrument(s) evidencing such assurances) are inadequate,
15 Respondent shall, within thirty (30) days of receipt of notice of EPA's determination, obtain and
16 present to EPA for approval one of the other forms of financial assurance listed in Paragraph 91,
17 above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing
18 the Work has increased, then, within thirty (30) days of such notification, Respondent shall obtain
19 and present to EPA for approval a revised form of financial assurance (otherwise acceptable
20 under this Section) that reflects such cost increase. Respondent's inability to demonstrate
21 financial ability to complete the Work shall in no way excuse performance of any activities
22 required under this Consent Order.

23 93. If Respondent seeks to ensure completion of the Work through a guarantee pursuant
24 to Subparagraph 91e or 91f of this Consent Order, Respondent shall (i) demonstrate to EPA's
25 satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii)
26 resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f)
27 annually, on the anniversary of the Effective Date, to EPA. For the purposes of this Consent
28 Order, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure
costs estimates and the current plugging and abandonment costs estimates," the cost estimate for

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4 the Work as identified in the Focused RI/FS Workplan (section 3.3.1 of the SOW) shall be used in
5 relevant financial test calculations. If Respondent seeks to ensure completion of the Work
6 through audited financial statements pursuant to Subparagraph 91g of this Consent Order,
7 Respondent shall submit annually until the Work is completed, a sworn statement by
8 Respondent's Chief Financial Officer(s) in substantially the same form as Appendix D.

9 94. If, after the Effective Date, Respondent can show that the estimated cost to complete
10 the remaining Work has diminished, Respondent may, on any anniversary date of the Effective
11 Date, or at any other time agreed to by the Parties, reduce the amount of the financial security
12 provided under this Section to the estimated cost of the remaining Work to be performed.
13 Respondent shall submit a proposal for such reduction to EPA, in accordance with the
14 requirements of this Section, and may reduce the amount of the security after receiving written
15 approval from EPA. In the event of a dispute, Respondent may reduce the amount of security in
16 accordance with the written decision resolving the dispute.

17 95. Respondent may change the form of financial assurance provided under this Section
18 at any time, upon notice to and prior written approval by EPA, provided that EPA determines that
19 the new form of assurance meets the requirements of this Section. In the event of a dispute,
20 Respondent may change the form of the financial assurance only in accordance with the written
21 decision resolving the dispute.

22 **XXX. SEVERABILITY/INTEGRATION/APPENDICES**

23 96. If a court issues an order that invalidates any provision of this Consent Order or finds
24 that Respondent has sufficient cause not to comply with one or more provisions of this Consent
25 Order, Respondent shall remain bound to comply with all provisions of this Consent Order not
26 invalidated or determined to be subject to a sufficient cause defense by the court's order.

27 97. This Consent Order and its Appendices constitute the final, complete and exclusive
28 agreement and understanding among the Parties with respect to the settlement embodied in this

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4 Consent Order. The parties acknowledge that there are no representations, agreements or
5 understandings relating to the settlement other than those expressly contained in this Consent
6 Order. The following Appendices are attached to and incorporated into this Consent Order:

7 "Appendix A" is the SOW.

8 "Appendix B is the map of the Motorola 52nd Street Site

9 "Appendix C" is the map of the Site

10 "Appendix D" is the financial assurances form letter

11 **XXXI. SUBSEQUENT MODIFICATION**

12 98. The EPA Project Coordinator may make modifications to any plan or schedule or
13 Statement of Work in writing or by oral direction. Any oral modification will be memorialized in
14 writing by EPA promptly, but shall have as its effective date the date of the EPA Project
15 Coordinator's oral direction. Any other requirements of this Consent Order may be modified in
16 writing by mutual agreement of the parties.

17 99. If Respondent seeks permission to deviate from any approved work plan or schedule
18 or Statement of Work, Respondent's Project Coordinator shall submit a written request to EPA
19 for approval outlining the proposed modification and its basis. Respondent may not proceed with
20 the requested deviation until receiving oral or written approval from the EPA Project Coordinator.

21 100. No informal advice, guidance, suggestion, or comment by the EPA Project
22 Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or
23 any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain
24 any formal approval required by this Consent Order, or to comply with all requirements of this
25 Consent Order, unless it is formally modified.

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4 **XXXII. EFFECTIVE DATE**

5 101. The effective date of this Consent Order shall be the date it is signed by EPA.

6 **XXXIII. NOTICE OF COMPLETION OF WORK**

7 102. When EPA determines, after EPA's review of the Final Focused Remedial
8 Investigation Report and Final Focused Feasibility Study Report, that all Work has been fully
9 performed in accordance with this Consent Order, with the exception of any continuing
10 obligations required by this Consent Order, EPA will provide written notice of completion of
11 Work to Respondent.

12
13 Agreed this 19th day of May, 2004

14 For Salt River Project

15
16 By: Richard M. Hayslip
17 Richard M. Hayslip
18 Manager
19 Environmental, Land, Risk Management and Telecom

20 It is so ORDERED AND AGREED this 2nd day of June, 2004

21
22 By: Kathleen H. Johnson DATE: _____
23 Kathleen Johnson
24 Chief, Federal Facilities and Site Cleanup Branch
25 U.S. Environmental Protection Agency
26 Region 9
27
28

1 human health and the environment. (Section 4.0 REMEDIAL INVESTIGATION)

2 • Finally, if EPA determines that the risks at the Site are unacceptable, the Respondent will
3 be required to develop and evaluate remedial alternatives that would mitigate the risks.

4 (Section 5.0 FEASIBILITY STUDY)

5
6 2.0 WORK TO BE CONDUCTED

7 The Respondent will conduct this RI/FS and will produce deliverables to EPA for review
8 and approval that are in accordance with the Consent Order, this SOW, "Guidance for
9 Conducting Remedial Investigations and Feasibility Studies Under CERCLA, U.S. EPA, Office
10 of Emergency and Remedial Response, October 1988" (RI/FS Guidance), presumptive remedy
11 guidance for characterizing and selecting remedies at sites with volatile organic compounds in
12 soils, and any other guidance documents that are relevant to conducting an RI/FS. A summary of
13 deliverables is provided in Attachment B and selected guidance and reference documents are
14 included in Attachment C. **The 1988 RI/FS Guidance describes the report format and the
15 required report content; relevant sections of the guidance are noted throughout this SOW
16 in parentheses.**

17
18 The Respondent will furnish all necessary personnel, materials, and services needed, or
19 incidental to, performing the RI/FS, except as otherwise specified in the Consent Order. All
20 work performed under this SOW shall be under the direction and supervision of qualified
21 personnel. All technical reports and other deliverables shall be prepared, stamped and signed
22 under the direction and supervision of an Arizona Professional Engineer or Registered Geologist.

23
24 The RI and FS are interactive and may be conducted concurrently so that the data
25 collected in the RI influences the development of remedial alternatives in the FS, which in turn
26 affects the data needs and the scope of treatability studies, if they are necessary. In addition,
27 EPA encourages presumptive remedies for sites with VOCs in soil, which will streamline the FS
28

1 process towards remedy selection. The Final RI/FS Report, as adopted by EPA, forms the basis
2 for the selection of the Site remedy and will provide the information necessary to support the
3 development of additional Records of Decision for the 52nd Street Site. The remedial action
4 alternative selected by EPA will meet the cleanup standards specified in CERCLA Section 121.
5

6 As specified in CERCLA Section 104(a)(1), EPA will provide oversight of the activities
7 conducted by the Respondent throughout the RI/FS, and the Respondent will support EPA's
8 implementation of oversight activities. The Respondent shall produce Monthly Progress Reports
9 according to the requirements in the Consent Order. The following sections describe the specific
10 deliverables and requirements for the RI/FS.
11

12 3.0 SCOPING PHASE (RI/FS Guidance, Chapter 2)

13 When scoping the specific aspects of a project, the Respondent must discuss with EPA all
14 project planning decisions and special concerns associated with the Site. The following
15 activities will be performed by the Respondent as a function of the scoping process:

16 3.1 Site Research (2.2)

17 The Respondent will conduct historical research of potential COC use and disposal at the
18 Site, and submit a report summarizing the results to EPA. This information will be utilized to
19 better scope the project and will guide the development of the subsequent Work Plans for
20 additional data collection necessary to characterize the Site, better define potential applicable or
21 relevant and appropriate requirements (ARARs), and narrow the range of preliminarily identified
22 remedial alternatives. Tasks for site research and reporting are detailed in the following
23 subsections.
24

25 3.1.1 Research Site Background

26 The Respondent will gather and analyze the existing Site background information, and
27 conduct additional research as needed to identify potential COC source areas at the Site. Before
28

1 planning RI/FS activities, all existing information will be thoroughly compiled and reviewed by
2 the Respondent. Specifically, this will include presently available information relating to the
3 varieties and quantities of COCs at the Site, and past disposal practices. The research is
4 expected to include records reviews and employee interviews. This report will also include
5 results from any previous sampling events that may have been conducted. The Respondent will
6 refer to Table 2-1 of the RI/FS Guidance for a comprehensive list of data collection information
7 sources. The Respondent shall use this information to develop a conceptual understanding of the
8 Site, i.e., its operations, contaminant uses and disposal, and potential migration pathways. Data
9 Quality Objectives (DQOs) will be established subject to EPA approval which specify the
10 usefulness of existing data. Decisions on the necessary data and DQOs will be made by EPA.

13 3.1.2 Conduct Site Visit

14 The Respondent will conduct a Site visit during the project scoping phase to assist in
15 developing a conceptual understanding of sources and areas of contamination as well as potential
16 exposure pathways and receptors at the Site. During the Site visit the Respondent should
17 observe the area's physiography, hydrology, geology, and demographics, as well as natural
18 resource, ecological and cultural features.

20 3.1.3 Research Report

21 The Respondent will submit a Research Report (RR) within sixty (60) days of the
22 Consent Order Effective Date. The RR will contain a compilation and summary of the activities
23 conducted above, and include a discussion of the potential COC source areas known or
24 suspected by the Respondent. The RR will contain (1) a narrative of the work completed, with
25 detailed descriptions of the configuration, operation, and historical uses of the potential source
26 areas, (2) detailed maps depicting all existing buildings and other Site features of interest,
27 figures, and tables depicting the layout, locations, and uses of Site features, and (3) any
28

1 recommendations for investigation of the areas. The RR shall also present a discussion of a
2 preliminary conceptual site model. This conceptual site model shall identify any known or
3 suspected sources of COC contamination, types of contaminants and affected media, fate and
4 transport of each contaminant in each medium and any known or potential human or
5 environmental receptors. This conceptual site model will be refined as new data become
6 available and presented in the RI/FS Work Plan, and reports.

8 3.2 Project Planning (2.2)

9 The Respondent will plan the specific project scope after the Research Report is
10 completed. Project planning activities include those tasks described below such as identifying
11 data needs, developing a work plan, designing a data collection program and identifying health
12 and safety protocols. The Respondent will discuss with EPA the activities described in the
13 subsections below and before the drafting of the scoping deliverables.

15 3.2.1 Refine and Document Preliminary Remedial Action Objectives and Alternatives (2.2.3)

16 EPA has identified preliminary remedial action objectives (RAOs) for the Site, which are
17 the goals for protecting human health and the environment. The RAOs specify contaminants and
18 media of concern, potential exposure pathways, and preliminary remediation goals. These RAOs
19 are relevant to the Site source areas and do not include RAOs for addressing the groundwater for
20 the 52nd Street OU3 study area. The preliminary remediation goals can be either ARARs of
21 other Federal and State environmental laws or risk-based concentrations. Examples of Federal
22 and State site characterization screening levels and remedial action levels for various
23 environmental media are provided in Attachment A for reference and guidance in refining the
24 Site investigation screening levels and Site RAO's. The preliminary RAO's for the Site
25 developed by EPA are listed below:

- 28 • Prevent human ingestion and direct dermal contact with contaminants in surface soils that

1 pose an excess carcinogenic risk greater than 10^{-6} or a noncarcinogenic hazard index (HI)
2 of greater than 1, a cumulative excess carcinogenic risk (all carcinogens) in excess of
3 10^{-4} , or a cumulative HI (all noncarcinogens) greater than 1.

- 4 • Prevent human inhalation of VOCs volatilizing from subsurface soil to air that pose an
5 excess carcinogenic risk greater than 10^{-6} or HI greater than 1, a cumulative excess
6 carcinogenic risk (all carcinogens) in excess of 10^{-4} , or a cumulative HI (all
7 noncarcinogens) greater than 1.
- 8 • Prevent leaching of contaminants to groundwater aquifers that would exceed any
9 respective MCL, or a total carcinogenic risk in excess of 10^{-6} or a cumulative HI greater
10 than 1.
- 11 • Prevent off-Site migration of groundwater contaminated by the Site that would exceed
12 any respective MCL, or a total carcinogenic risk in excess of 10^{-6} or a cumulative HI
13 greater than 1 and that would be above such levels expected to be addressed by the 52nd
14 Street Site OU3 study area groundwater remedial action, as determined by EPA and
15 ADEQ.
- 16 • Ensure ecological receptors important at the individual level of ecological organization
17 (listed threatened or endangered) do not reside in areas at the Site where relevant hazard
18 indices exceed 1.
- 19 • Ensure existing Site contaminant conditions do not change so as to threaten wildlife
20 populations and vegetation communities.
- 21
- 22
- 23
- 24

25 The Respondent will review and, if necessary, refine the RAOs for each actually or
26 potentially contaminated medium The Respondent will also include objectives for the use of
27 institutional controls. The Respondent will then identify a preliminary range of broadly defined
28

1 potential remedial action alternatives, associated technologies, and institutional controls, if
2 necessary. The range of potential alternatives should encompass where appropriate, alternatives
3 in which treatment significantly reduces the toxicity, mobility, or volume of the waste;
4 alternatives that involve containment with little or no treatment; and a no-action alternative. The
5 Respondent should consider all presumptive site characterization and remedy selection guidance
6 available for sites contaminated with the COCs. Respondent will document the revised RAOs
7 and alternatives in a Remedial Action Objectives Technical Memorandum and submit this
8 document to EPA within seventy-five (75) days of the Consent Order Effective Date.

10 3.2.2 Document the Need for Treatability Studies (2.2.4)

11 If remedial actions involving treatment have been identified by the Respondent or EPA,
12 treatability studies will be required except where the Respondent can demonstrate to EPA's
13 satisfaction that they are not needed. Where treatability studies are needed, plans for initial
14 treatability testing activities (such as research and study design) will be submitted in the work
15 plan described in Section 3.3.1 and planned to occur concurrently with Site characterization
16 activities.

18 3.2.3 Begin Preliminary Identification of Potential ARARs (2.2.5)

19 The Respondent will conduct a preliminary identification of potential state and federal
20 ARARs (chemical-specific, location-specific and action-specific) to assist in the refinement of
21 RAOs, and the initial identification of remedial alternatives and ARARs associated with
22 particular actions. ARAR identification will continue as Site conditions, contaminants, and
23 RAOs are better defined. Respondent will indicate the initial results of this review in the
24 Remedial Action Objectives Technical Memorandum, and continue to revise in deliverables due
25 throughout the RI/FS process.

28 3.3 Planning Deliverables (2.3)

1 At the conclusion of the project planning phase, the Respondent will submit an RI/FS
2 Work Plan which includes a sampling and analysis plan and health and safety plan. These
3 planning documents must be approved by EPA prior to the initiation of field activities. These
4 deliverables are described in detail in the following subsections.

6 3.3.1 Focused RI/FS Work Plan (2.3.1)

7 Respondent will submit to EPA a Draft Focused Remedial Investigation/Feasibility Study
8 Work Plan ("WP") within ninety (90) days of the Consent Order Effective Date. The WP will
9 document the decisions and evaluations completed during the scoping process. The RI and FS
10 activities that the WP shall address are described in more detail in Sections 4.0 and 5.0. The
11 WP should be developed in conjunction with the sampling and analysis plan and the health and
12 safety plan, although each plan may be delivered under separate cover. The WP will include a
13 statement of the problem(s) and potential problem(s) posed by the Site and the objectives of the
14 RI/FS, a comprehensive description of the work to be performed to meet those objectives,
15 including the methodologies to be utilized and the rationale for performing the required
16 activities, as well as a corresponding schedule for completion. Twenty-one (21) days following
17 comment by EPA, the Respondent will submit a Final WP, which satisfactorily address EPA's
18 comments.

21 The Respondent will include in the WP: a Site background summary setting forth the Site
22 description, including the Site's geographic location, and to the extent possible, a description of
23 the Site's physiography, hydrology, geology, demographics, ecological, cultural and natural
24 resource features; a synopsis of the Site history and a description of previous responses that have
25 been conducted at the Site by local, state, federal, or private parties; and a summary of the
26 existing data in terms of physical and chemical characteristics of the contaminants identified, and
27 their distribution among the environmental media at the Site. In addition, the Respondent will
28

1 include in the WP a description of the Site management strategy developed by EPA during
2 scoping, a preliminary identification of remedial alternatives, data needs for evaluation of
3 remedial alternatives, a process for and manner of identifying Federal and State ARARs
4 (chemical-specific, location-specific and action-specific), and will reflect coordination with
5 treatability study requirements, if needed.
6

7 The Respondent will present in the WP a discussion of a preliminary conceptual site
8 model. The Respondent will identify any known or suspected sources of COC contamination,
9 types of contaminants and affected media, fate and transport of each contaminant in each
10 medium and any known or potential human or environmental receptors. The Respondent will
11 refine the conceptual site model as new data become available and present it in the Focused
12 Remedial Investigation Report (see Section 4.3). The conceptual site model will be based on the
13 research work completed during scoping, and include detailed descriptions of the configuration,
14 operation, and historical uses of the potential source areas, detailed maps depicting all existing
15 buildings and other Site features of interest, figures, and tables depicting the layout, locations,
16 and uses of Site features, and any recommendations for investigation of the areas.
17

18 The Respondent will also identify the current use of the Site in accordance with EPA's
19 "Land Use in CERCLA Remedy Selection Process," OSWER Directive No. 9355.7-04, May 25,
20 1995 (hereinafter the "Land Use Guidance"), including the use(s) of property located over any
21 ground water plume, if applicable, and will state the basis for these determinations. Information
22 regarding existing Site use should also be gathered to assist in identifying the reasonably
23 anticipated future use of the Site. If EPA determines it is appropriate, Respondent shall conduct
24 a reuse assessment in accordance with the Land Use Guidance and "Reuse Assessments: A Tool
25 to Implement the Superfund Land Use Directive," OSWER 9355.7-06P, June 4, 2001, to
26 identify the reasonably anticipated future use of the Site. Respondent shall document the reuse
27
28

1 assessment in the WP, if conducted.

2 Finally, the major part of the WP is a detailed description of the tasks to be performed,
3 information needed for each task, information to be produced during and at the conclusion of
4 each task, and a description of the work products that will be submitted to EPA. This includes
5 the deliverables set forth in the remainder of this statement of work; a schedule for each of the
6 required activities which is consistent with the RI/FS guidance; and a project management plan,
7 including a data management plan (e.g., requirements for project management systems and
8 software, minimum data requirements, data format and backup data management), and reports,
9 meetings and presentations to EPA at the conclusion of each major phase of the RI/FS. The
10 Respondent will refer to Appendix B of the RI/FS Guidance for a comprehensive description of
11 the contents of the required WP.
12

13
14 Because of the unknown nature of the Site and iterative nature of the RI/FS, additional
15 data requirements and analyses may be identified throughout the process. The Respondent will
16 submit a Technical Memorandum documenting the need for additional data requirements to be
17 identified at the request of EPA or as otherwise necessary within 20 days of identification. Upon
18 approval, Respondent will incorporate the Technical Memorandums into the WP. The
19 Respondent is responsible for fulfilling and identifying the Data Quality Objectives (DQOs)
20 described in the next section whenever such additional data and analysis needs are identified by
21 EPA consistent with the general scope and objectives of this RI/FS.
22

23 3.3.2 Sampling and Analysis Plan (2.3.2)

24 The Respondent will submit a sampling and analysis plan (SAP) within ninety (90) days
25 of the Consent Order Effective Date. The SAP is produced to ensure that sample collection and
26 analytical activities are conducted in accordance with technically acceptable protocols and that
27 the data meet DQOs. The SAP provides a mechanism for planning field activities and consists
28

1 of a field sampling plan (FSP) and a quality assurance project plan (QAPP).

2 In the FSP, the Respondent will define in detail the sampling and data-gathering methods
3 that will be used on the project. Respondent will include sampling objectives, sample location
4 and frequency, sampling equipment and procedures, and sample handling and analysis. In the
5 QAPP, Respondent will describe the project objectives and organization, functional activities,
6 and quality assurance and quality control (QA/QC) protocols that will be used to achieve the
7 desired DQOs. Respondent will prepare the QAPP in accordance with "Guidance for Data
8 Quality Objectives (DQOs) Process (QA/G-4)" (EPA/600/R-96/055, August 2000), "EPA
9 Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001),
10 and "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December
11 2002). In addition, Respondent will address in the QAPP sampling procedures, sample custody,
12 analytical procedures, and data reduction, validation, reporting and personnel qualifications.

13 The Respondent will demonstrate to EPA's satisfaction that each laboratory it may use is
14 qualified to conduct the proposed work. The Respondent will only use laboratories that have a
15 documented Quality Assurance Program that complies with EPA and State requirements. The
16 laboratory QA program must be submitted to EPA. This includes use of methods and analytical
17 protocols for the COCs in the media of interest within detection and quantification limits
18 consistent with both QA/QC procedures and DQOs approved in the QAPP for the Site by EPA.
19 EPA may require that the Respondent submit detailed information to demonstrate that the
20 laboratory is qualified to conduct the work, including information on personnel qualifications,
21 equipment and material specifications. The Respondent will provide assurances that EPA has
22 access to laboratory personnel, equipment and records, sample collection, transportation and
23 analysis. Finally, laboratories must provide data according to "Laboratory Documentation
24 Requirements for Data Validation Packages", July 1997 (EPA 9QA-07-97) or other equivalent
25
26
27
28

1 documentation as determined by EPA.

2 3.3.3 Site Health and Safety Plan (2.3.3)

3 The Respondent will submit a health and safety plan (HASP) within ninety (90) days of
4 the Consent Order Effective Date prepared in conformance with the health and safety program of
5 the Respondent, and in compliance with Occupational Safety and Health Administration
6 (OSHA) regulations and protocols. The HASP will include the 11 elements described in the
7 RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and
8 personnel protective equipment, medical monitoring, and Site control. It should be noted that
9 EPA does not "approve" the HASP, but rather EPA reviews it to ensure that all necessary
10 elements are included, and that the plan provides for the protection of human health and the
11 environment.
12

13 3.4 Community Involvement

14 The development and implementation of community involvement activities for the Site
15 investigation are the responsibility of EPA. The critical community involvement planning steps
16 performed by EPA include conducting community interviews and developing a Focused
17 community involvement plan (CIP). Although implementation of the CIP is the responsibility of
18 EPA, the Respondent may assist by providing information regarding the Site's history,
19 participating in public meetings, or by preparing fact sheets for distribution to the general public.
20 The extent of Respondent involvement in community involvement activities is left to the
21 discretion of EPA. Community involvement activities conducted by Respondent will be subject
22 to oversight by EPA.
23

24 4.0 REMEDIAL INVESTIGATION (RI/FS Guidance, Chapter 3)

25 During this phase of the RI/FS, the Respondent will begin to implement the approved WP
26 and SAP. The RI activities will include performance of the field activities described in the
27
28

1 subsections below including preparation and submission of a Focused Remedial Investigation
2 Report (FRIR) (see Section 4.3). The overall objective of this phase is to collect data to describe
3 the COC source areas at the Site that may pose a threat to human health or the environment.
4 This is accomplished by first determining the physiography, geology, and hydrology at the Site.
5 The Respondent will identify the sources of COC contamination, if any, and define the nature,
6 extent, and volume of the sources of contamination, including their physical and chemical
7 constituents as well as their concentrations at incremental locations to background in the affected
8 media. The Respondent will also investigate the extent of migration of this contamination,
9 including surface and subsurface pathways of migration, as well as its volume and any changes
10 in its physical or chemical characteristics, to provide for a comprehensive understanding of the
11 nature and extent of contamination at the Site. Using this information, contaminant fate and
12 transport is then determined and projected. A focused risk assessment is then conducted
13 considering the chemical concentrations detected and/or projected in the subsurface.

14
15 The Respondent will collect and analyze field data to provide the information required to
16 accomplish the objectives of the study. In view of the unknown Site conditions, activities are
17 often iterative, and to satisfy the objectives of the RI/FS it may be necessary for the Respondent
18 to supplement the work specified in the initial WP. As described in Section 3.3.1 this may be
19 done through submission of Technical Memorandums either initiated by the Respondent or
20 requested by EPA.

21 4.1 Field Investigation (3.2)

22 The field investigation includes the gathering of data to define Site physical and
23 biological characteristics, sources of contamination, and the nature and extent of contamination
24 at the Site. The Respondent will perform these activities in accordance with the WP, SAP, and
25 HASP. The Respondent will notify EPA with a Notification of Initiation of Field Work (FW) at
26

1 least fifteen (15) days prior to initiating any physical work in the field. The Notification will
2 include the planned dates for field activities so that EPA may adequately schedule oversight
3 tasks. The Respondent will notify EPA in writing within five (5) days of completion of field
4 work activities and receipt of analytical data from the lab, with a Notification of Completion of
5 Field Work. Upon submission of the Notification of Initiation of Field Work, Respondent will
6 provide Weekly Progress Reports according to the requirements in the Consent Order. Weekly
7 reports may be discontinued upon Notification of Completion of Field Work.

8
9 Field work activities may include field lay out of the sampling grid, initiating sampling,
10 installation and calibration of equipment, initiation of analysis, etc. Field work activities will
11 address the following:

12
13 4.1.1 Field Support Activities (3.2.1)

14 The Respondent will initiate field support activities following approval of the WP and
15 SAP according to the schedule in the WP. Field support activities may include obtaining access
16 to the Site, scheduling, procuring equipment, office space, laboratory services, and/or
17 contractors. Respondent will document these types of activities in the Weekly Progress Reports
18 according to the requirements in the Consent Order.

19
20 4.1.2 Physical and Biological Characteristics (3.2.2)

21 The Respondent will collect data on the physical and biological characteristics of the Site
22 and its surrounding areas including the physiography, geology, and hydrology, and specific
23 physical characteristics identified in the WP. The Respondent will ascertain this information
24 through a combination of physical measurements, observations, and sampling efforts and the
25 Respondent will utilize the information to define potential transport pathways and human and
26 ecological receptor populations. In defining the Site's physical characteristics, the Respondent
27 will also obtain sufficient engineering data for the projection of contaminant fate and transport,
28

1 and development and screening of remedial action alternatives, including information to assess
2 treatment technologies.

3 4.1.3 Sources of Contamination (3.2.3) 4

5 The Respondent will locate each source of COC contamination. For each location, the
6 areal extent and depth of contamination will be determined by sampling at incremental depths on
7 a sampling grid, or appropriately targeted locations based on the CSM developed in the WP, and
8 refined throughout the RI. Respondent will determine the physical characteristics and chemical
9 constituents and their concentrations for all known and discovered sources of COC
10 contamination. The Respondent will conduct sufficient sampling to define the boundaries of the
11 contaminant sources to the level established in the QAPP and DQOs.
12

13 In defining the source of contamination Respondent will analyze the potential for
14 contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence,
15 and characteristics important for evaluating remedial actions, including information to assess
16 treatment technologies.

17 4.1.4 Nature and Extent of Contamination (3.2.4) 18

19 As a final step during the field investigation, the Respondent will gather information to
20 be able to describe the nature and extent of contamination in the FRIR. To describe the nature
21 and extent of contamination, the Respondent will utilize the information on Site physical and
22 biological characteristics and sources of contamination to give a preliminary estimate of the
23 contaminants that may have migrated. The Respondent will then implement an iterative
24 monitoring program and any study program identified in the WP or SAP such that by using
25 analytical techniques sufficient to detect and quantify the concentration of contaminants, the
26 migration of contaminants through the various media at the Site can be determined.
27

28 In addition, the Respondent will gather data for calculations of contaminant fate and

1 transport. This process is continued until the area and depth of contamination are known to the
2 level of contamination established in the QAPP and DQOs. The Respondent will use the
3 information on the nature and extent of contamination to determine the level of risk presented by
4 the Site, and determine aspects of the appropriate remedial action alternatives to be evaluated.

6 4.2 Data Analyses/Evaluate Site Characteristics (3.4.1)

7 The Respondent will analyze and evaluate the data in order to be able to describe in the
8 FRIR: (1) Site physical and biological characteristics, (2) contaminant source characteristics, (3)
9 nature and extent of contamination (4) contaminant fate and transport, and (5) risks to human
10 health and the environment. These elements are described in the subsections below:

12 4.2.1 Site Characteristics (3.4.1)

13 The Respondent will utilize the results of the Site physical characteristics, source
14 characteristics, and extent of contamination analyses in the analysis of contaminant fate and
15 transport. The evaluation will include the actual and potential magnitude of releases from the
16 sources, and horizontal and vertical spread of contamination as well as mobility and persistence
17 of contaminants.

18 Where modeling is appropriate, Respondent will identify such models to EPA in the
19 RI/FS WP and if necessary, as supplemented by a Technical Memorandum. All data and
20 programming, including any proprietary programs, will be made available to EPA together with
21 a sensitivity analysis. The Respondent will agree to discuss and then collect any data gaps
22 identified by the EPA that are needed to complete the RA. (See "Guidance for Data Useability
23 in Risk Assessment - OSWER Directive #9285.7-05, October 1990.)
24

25 Also, Respondent will provide in this evaluation any information relevant to Site
26 characteristics necessary for evaluation of the need for remedial action in the RA and for the
27 development and a evaluation of remedial alternatives. Analyses of data collected for Site
28

1 characterization will meet the DQOs developed in the QAPP stated in the SAP (or revised during
2 the RI).

3 4.2.2 Risk Assessment (3.4.2)

4 If EPA determines that the results of the initial Site characterization indicate sources of
5 COCs in the soil and/or groundwater, the Respondent will submit a Focused RA in the FRIR and
6 evaluate baseline COC conditions as developed through the field investigations and data
7 analysis. In the assessment, Respondent will consider both current and possible future uses of
8 the Site. The RA will identify possible exposure pathways, evaluate contaminant fate and
9 transport, and characterize health risks. Respondent will base exposure scenarios on land use
10 assumptions that will be developed in collaboration with the EPA.
11

12 4.2.3 Data Management Procedures (3.5)

13 The Respondent will consistently document the quality and validity of field and
14 laboratory data compiled during the RI according to the procedures established in the WP. The
15 following subsections describe the data management procedures expected throughout the RI/FS:
16

17 4.2.3.1 Document Field Activities (3.5.1)

18 The Respondent will ensure that all information gathered during Site characterization
19 will be consistently documented and adequately recorded by the Respondent in well maintained
20 field logs and laboratory reports. The method(s) of documentation must be specified in the WP
21 and/or the SAP. Field logs must be utilized to document observations, measurements, and
22 significant events that have occurred during field activities. Laboratory reports must document
23 sample custody, analytical responsibility, analytical results, adherence to prescribed protocols,
24 nonconformity events, corrective measures, and/or data deficiencies. Ultimately, these
25 documents will be compiled and submitted to EPA as appendices to the FRIR; however, they
26 may be requested by EPA throughout performance of the RI activities and/or in the Weekly
27
28

1 Progress Reports.

2 4.2.3.2 Sample Management and Tracking (3.5.2; 3.5.3)

3 The Respondent will maintain field reports, sample shipment records, analytical results,
4 and QA/QC reports to ensure that only validated analytical data are reported and utilized in the
5 development and evaluation of remedial alternatives. Analytical results developed under the WP
6 will not be included in any Site characterization reports unless accompanied by or
7 cross-referenced to the corresponding QA/QC report.
8

9 In addition, the Respondent will establish a data security system to safeguard chain-of-
10 custody forms and other project records to prevent loss, damage, or alteration of project
11 documentation.
12

13 4.2.3.3 Database Management

14 If groundwater data is collected, the Respondent will maintain this data in an electronic
15 database, the Respondent will comply with the most recent Arizona Department of
16 Environmental Quality Groundwater Data Submittal Guidance Document, currently Version 3.1,
17 dated December 2003, and any additional requirements EPA deems necessary.
18

19 4.3 Focused Remedial Investigation Report (3.7.3)

20 The Respondent will submit a Draft Focused Remedial Investigation Report (FRIR) to
21 EPA within sixty (60) days of Notification of Completion of Fieldwork, or as extended by EPA.
22 In the FRIR Respondent will review and summarize results of activities conducted in the
23 previous subsections to characterize and assess the risks to human health and the environment at
24 the Site. Respondent will include an updated of the site conceptual model and will evaluate the
25 risks to human health and the environment through a RA. For example, the FRIR will describe
26 and display Site data documenting the location and characteristics of surface and subsurface
27 features and contamination at the Site, such as sources of contamination, nature and extent of
28

1 contamination and the fate and transport of contaminants. The Respondent will refer to the
2 RI/FS Guidance for an outline of the FRIR format and contents. Twenty-one (21) days
3 following comment by EPA, the Respondent will submit a Final FRIR which satisfactorily
4 address EPA's comments.

6 5.0 FEASIBILITY STUDY (RI/FS Guidance, Chapter 4)

7 If EPA determines that the results of the FRIR identify risks to human health and/or the
8 environment, the Respondent will conduct an evaluation of the remedial alternatives that will
9 address those risks and complete a Focused Feasibility Study (FFS) for EPA to use in
10 determining the remedy for the Site. The following activities detail the FFS process:

12 5.1 Development and Screening of Remedial Alternatives (4.2)

13 The Respondent will develop and evaluate a range of appropriate waste management
14 options that at a minimum ensure protection of human health and the environment, concurrent
15 with the RI Site characterization task. This range of alternatives should include as appropriate,
16 options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, but
17 varying in the types of treatment, the amount treated, and the manner in which long-term
18 residuals or untreated wastes are managed; options involving containment with little or no
19 treatment; options involving both treatment and containment; and a no-action
20 alternative. Respondent should consider guidance related to presumptive remedies for COCs in
21 soils. The results of this will provide a basis for completion of the next subtask.

23 5.2 Detailed Analysis of Remedial Alternatives (RI/FS Guidance, Chapter 6)

24 The Respondent will conduct a detailed analysis of the remedial alternatives screened in
25 the previous subtask. The detailed analysis will consist of an analysis of each option against the
26 set of nine evaluation criteria and a comparative analysis of all options using the same evaluation
27 criteria as a basis for comparison: (1) overall protection of human health and the environment;
28

(2) compliance with ARARS; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) state (or support agency) acceptance; and (9) community acceptance. Criteria 8 and 9 may be considered after the FFS Report has been released to the general public. If any of the retained remedial alternatives includes institutional controls which require state or community participation to implement, monitor, or enforce, then state and community acceptance must be determined prior to public release of the FFS Report. This analysis is the final task to be performed by the Respondent during the FFS, and will be submitted as part of the Final FFS Report.

5.3 Focused Feasibility Study Report (6.5)

The Respondent will submit a Draft FFS Report (FFSR) to EPA within sixty (60) days of EPA approval of the RIR, or as extended by EPA. This FFSR, as ultimately adopted or amended by EPA, provides a basis for remedy selection by EPA and documents the development and analysis of remedial alternatives. The Respondent will refer to the RI/FS Guidance for an outline of the FFSR format and the required report content. The Respondent will submit a Final FFSR within twenty-one (21) Days of EPA comments. Once EPA's comments are addressed by the Respondent to EPA's satisfaction, the Final FFSR may be bound with the FRIR.

----- ATTACHMENT A-----

CONTAMINANTS OF CONCERN (COC'S)

Potential Site Characterization Screening Levels and Remedial Action Levels

Data Sources: 1EPA Region 9 PRGs Table, 10/01/02 2ADHS 1999 Update AAAQGs, 5/11/99 3ADHS Draft Arizona Ambient Air HGBLs, 5/11/99 4EPA Draft Subsurface Vapor Intrusion Guidance, Table 2c, 11/29/02 5ADEQ A Screening Method to Determine Soil Concentrations Protective of Groundwater Quality, 09/96 ----- Chemical Name	Air ($\mu\text{g}/\text{m}^3$)			Soil (mg/kg)				Soil Gas ($\mu\text{g}/\text{m}^3$)	Groundwater ($\mu\text{g}/\text{L}$)			
	Direct Contact Exposure Pathways					Migration to Groundwater		Migration to Indoor Air (Vapor Intrusion)	Direct Contact Exposure Pathway		2002 Max. Detections	
	Annual 30 yr.	Annual 70 yr.-24 Hour		Residential. - Non Res.					EPA PRG ¹ (Tap Water)	EPA MCL/ ADEQ AWQS		
	EPA PRG ¹	AAAQGs Annual-24 Hour ²	ADHS HBGLs ³	EPA PRGs ¹	ADEQ SRLs	EPA SSLs DAF 1-20 ¹	ADEQ GPLs ⁵	EPA SSLs ⁴ AF 0.1; 1x10 ⁶ risk			OU2 Area	OU3 Area
Chloroethane/Ethyl Chloride (CA)	2.3	N/A	4300-43000	3.0 - 6.5	1100-4200	N/A	N/A	100000	4.6	N/A	160	NS
1,1-Dichloroethane (1,1-DCA)	520	N/A-3200	210-2100	510-1700	500-1700	1-23	N/A	5000	810	N/A	110	50
1,2-Dichloroethane (1,2-DCA)	0.074	0.038-14	0.73-43	0.28 - 0.60	2.5-5.5	0.001-0.02	0.21	0.94	0.12	5	ND	0.6
1,1-Dichloroethylene (1,1-DCE)	210	N/A-63	0.38-140	120 - 410	0.36-0.8	0.003-0.06	0.81	2000	340	7	130	60
cis-1,2-Dichloroethylene (cis-1,2-DCE)	37	N/A-6300	15-150	43-150	31-100	0.02-0.4	4.9	N/A	61	70	220	150
trans-1,2-Dichloroethylene (trans-1,2-DCE)	73		30-300	69-230	78-270	0.03-0.7	8.4	N/A	120	100	1.4	3
Tetrachloroethylene (PCE)	0.67	1.7-640	15-150	1.5-3.4	53-170	0.003-0.06	1.3	8.1	0.66	5	15	19
1,1,1-Trichloroethane (1,1,1-TCA)	2300	N/A-15000	430-4300	1200	1200-4800	0.1-2	1.0	22000	3200	200	2.4	ND
1,1,2-Trichloroethane (1,1,2-TCA)	0.12	0.062-23	1.2-60	0.73-1.6	6.5-15	0.0009-0.02	N/A	1.5	0.2	5	ND	ND
Trichloroethene (TCE)	0.017	0.58-210	9-90	0.053-0.11	27-70	0.003 - 0.06	0.61	22	0.028	5	650	720
Vinyl Chloride/Chloroethene (CE)	0.11	0.012-4.3	0.02-N/A	0.079-0.75	0.016-0.035	0.0007-0.01	N/A	2.8	0.02	2	16	0.3
1,4-Dioxane	0.61	N/A-710	6-N/A	44-160	400-1700	N/A	N/A	N/A	6.1	N/A	11	12

List of Acronyms

EPA = EPA Region 9

AAAQGs = Arizona Ambient Air Quality Guidelines

SSL = Soil Screening Levels

AF = Soil Gas to Indoor Air Attenuation Factor

AWQS = AAC Aquifer Water Quality Standards

ADEQ = Arizona Department of Quality

PRG = Preliminary Remediation Goal

GPL = Groundwater Protection Levels

MCL = National Primary Drinking Water Standards Maximum Contaminant Level

N/A = Not Available

ADHS = Arizona Department of Health Services

SRL = Soil Remediation Levels, Arizona Administrative Code (AAC) Title 18, Ch 7 Appendix A

DAF = Dilution Attenuation Factor

ND = Non Detect

NS = Not Sampled

-----ATTACHMENT B-----

SUMMARY OF DELIVERABLES

SOW Section	Submittals and Deliverables	Due Date
2.0	Monthly Progress Reports	Each 10 th day after ED
3.1.3	Research Report (RR)	60 days after ED
3.2.1	Remedial Action Objectives Technical Memorandum	75 days after ED
3.3.1	Draft Focused RI/FS Work Plan (WP)*	90 days after ED
3.3.1	Technical Memorandums (to supplement WP)	Within 20 days as identified or requested
3.3.2	Draft Sampling and Analysis Plan (SAP)*	90 days after ED
3.3.3	Draft Site Health and Safety Plan (HASP)*	90 days after ED
4.1	Notification of Initiation of Field Work (FW)	15 days in advance
4.1	Weekly Progress Reports	Each Monday during FW
4.1	Notification of Completion of Field Work (FW)	5 days after completion of FW
4.3	Draft Focused Remedial Investigation Report (FRIR)*	60 days after completion of FW
5.3	Draft Focused Feasibility Study Report (FFSR)*	60 days after approval of Final FRIR
3.3.1 4.3 5.3	*Final Deliverables	21 days after receipt of EPA comment

----- ATTACHMENT C-----

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI/FS process:

"The National Oil and Hazardous Substances Pollution Contingency Plan" Final Rule, Federal Register 40 CFR Part 300, March 8, 1990.

"Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, Interim Final, OSWER Directive No. 9355.3-01, EPA-540-G-89-004, October 1988.

"Interim Guidance on Potentially Responsible Party Participation in Remedial Investigation and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, Appendix A to OSWER Directive No. 9355.3-01.

"Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies," Volume I, U.S. EPA, Office of Waste Programs Enforcement, OSWER Directive No. 9835.1(c), July 1, 1991.

"Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies, Volume II" U.S. EPA, Office of Waste Programs Enforcement, OSWER Directive No. 9835.1(d), July 1, 1991.

"Getting Ready: Scoping the RI/FS," U.S. EPA, Office of Emergency and Remedial Response, EPA-9355.3-01-FS1, November 1989.

"A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA-540-P-87-001a, OSWER Directive No. 9355.0-14, August 1987.

"Guidance to Management of Investigation-Derived Wastes," U.S. EPA Office of Solid Waste and Emergency Response, Publication 9345.3-03GS, January 1992.

"EPA Requirements for Quality Management Plans (QA/R-2)," EPA-240-B-01-002, March 2001.

"EPA Requirements for Quality Assurance Project Plans (QA/R-5)" EPA-240-B-01-003, March 2001.

"Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002).

"Data Quality Objectives Process for Superfund," U.S. EPA, Office of Solid Waste and

1 Emergency Response, OSWER Directive No. 9335.9-01A., EPA-540-R-93-071, September
2 1993.

3 "Guidance for the Data Quality Objectives Process," U.S. EPA Quality Assurance Management
4 Staff, EPA QA/G-4, EPA 600-R-96-055, August 2000.

5 "Guidance for the Data Quality Objectives Process for Hazardous Waste Sites," U.S. EPA
6 Quality Assurance Management Staff, EPA QA/G-4HW, EPA-600-R-00-007, January 2000.

7 "Laboratory Documentation Requirements for Data Validation Packages", EPA Region 9,
8 EPA9QA-07-97, July 1997.

9 "Guidance for Preparing Standard Operating Procedures (SOPs)," Office of Environmental
10 Information, EPA QA/G-6, EPA-240-B-01-004, March 2001.

11 "User's Guide to the EPA Contract Laboratory," U.S. EPA, Sample Management Office,
12 OSWER Directive No. 9240.0-01D, January 1991.

13 "NIOSH Manual of Analytical Methods, 2nd Edition. Volumes I-VII for the 3rd edition, Volumes
14 I and II, " National Institute of Occupational Safety and Health.

15 "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements,"
16 U.S. EPA Office of Emergency and Remedial Response, OSWER Directive No. 9234.0-05, July
17 9, 1987.

18 "CERCLA Compliance with Other Laws Manual (draft)," Two Volumes, U.S. EPA, Office of
19 Emergency and Remedial Response, OSWER Directive No. 9234.1-01 and -02, August 1988 .

20 "NEIC Policies and Procedures Manual, " EPA-330-9-78-001-R, May 1978, revised August
21 1991, .

22 "Permits and Permit "Equivalency" Processes for CERCLA On-site Response Actions," U.S.
23 EPA Office of Solid Waste and Emergency Response, OSWER Directive No. 9355.7-03,
24 February 1992.

25 "Procedures for Planning and Implementing Off-Site Response Actions", Federal Register,
26 Volume 50, Number 214, pages 45933-45937, November 1985.

27 "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites (draft),"
28 U.S. EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9283.1-2.

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The map illustrates the Motorola 52nd St Superfund Site in Phoenix, Arizona. It shows three Operable Units (OUs) and their associated study areas and treatment facilities.

- OU1:** Located on the right side of the map, near the Former Motorola Facility. It includes the OU1 Treatment Plant.
- OU2:** Located in the center of the map. It includes the OU2 Treatment Plant.
- OU3 Study Area:** A large rectangular area on the left side of the map.

Key features and labels include:

- GROUNDWATER CAPTURE ZONE:** Indicated by a dashed line.
- DISCHARGE TO GRAND CANAL:** Indicated by an arrow pointing towards the right.
- Honeywell Facility (Formerly Allied Signal):** Located near the center-right of the map.
- Former Motorola Facility:** Located near the top right of the map.
- OU1 TREATMENT PLANT:** Located near the Former Motorola Facility.
- OU2 TREATMENT PLANT:** Located near the Honeywell Facility.

Legend:

- Estimated Site Boundary
- Contour represents area of volatile organic compounds in alluvial groundwater that exceed the Aquifer Water Quality Standards.
- Dashed Line indicates Inferred Site Boundary
- Groundwater Extraction Well
- Treatment System Pipeline
- Road
- Canal

Scale: 0 to 5000 Feet

North Arrow: Points North.

Logos: National Department of Environmental Protection and United States Environmental Protection Agency.

Motorola 52nd St Superfund Site
FEBRUARY, 2003
PHOENIX, ARIZONA

PREP: NLC
REV:

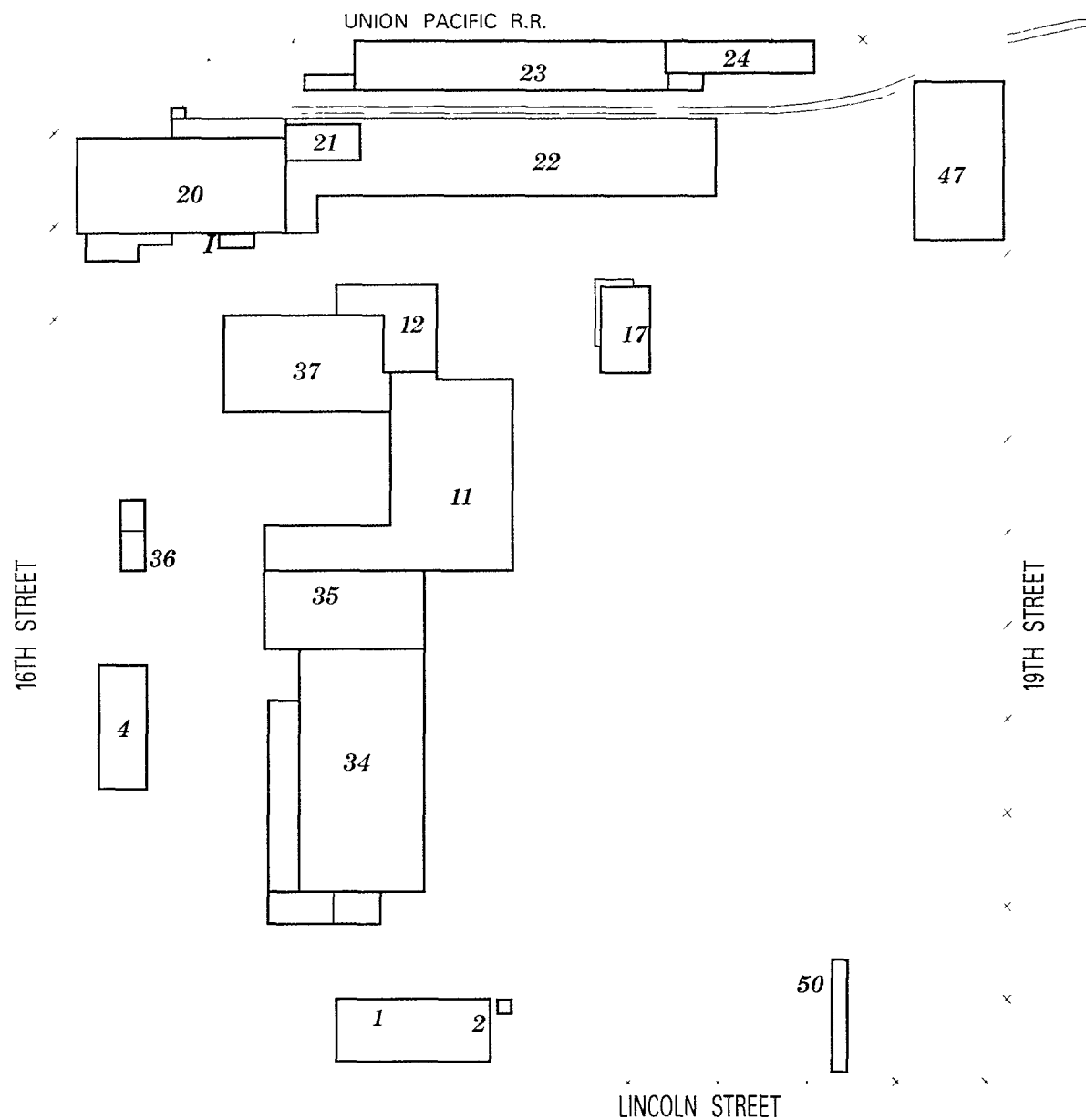
FILE:

Water Quality Source Data September 2002

APPENDIX C

16TH STREET FACILITY

1616 East Lincoln Street
Phoenix, Arizona 85034-3440



LEGEND

BLDG #1	OFFICE BUILDING
2	SECURITY
4	FIRE PREVENTION OFFICE
11	WAREHOUSE
12	WAREHOUSE & AUTO PARTS
17	OFFICE
20	WAREHOUSE
21	OFFICE
22	WAREHOUSE & DOCK
23	WAREHOUSE & DOCK
24	DOCK
34	HEAVY EQUIPMENT GARAGE
35	LAB & OFFICE
36	WASH RACK
37	TOOL ROOM & WAREHOUSE
47	WAREHOUSE
50	60 TON SCALE
I	ICE HOUSE
NOT TO SCALE	



NORTH

APPENDIX D

Dear [R.A. for EPA Region 9]:

I am the [chief financial officer] of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for its Work obligations as defined in that certain Administrative Order on Consent for Focused Remedial Investigation and Feasibility Study, U.S. EPA Region 9, CERCLA Docket No. 2004-19 ("Consent Order"). The Consent Order requires this firm to post financial assurance in an amount equal to [the amount of the Work required by the Consent Order] \$XXXXXX ("FA Amount").

I hereby certify to the U.S. Environmental Protection Agency, based on this firm's independently audited, year-end financial statements for its latest completed fiscal year, ended [date], that:

[either 1 or 2; not both]

(1) (A) The firm meets two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) The firm possesses net working capital and tangible net worth each at least six times the FA Amount; and

(C) The firm possesses tangible net worth of at least \$10 million; and

(D) The firm owns assets located in the United States amounting to at least 90 percent of its total assets or at least six times the FA Amount.

-OR-

(2) (A) The firm has a current rating for its most recent [long-term debt] issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) The firm possesses tangible net worth at least six times the FA Amount; and

(C) The firm possesses tangible net worth of at least \$10 million; and

(D) The firm owns assets located in the United States amounting to at least 90 percent of its total assets or at least six times the FA Amount.

Sincerely,
[Name]
[Title]
[Company]